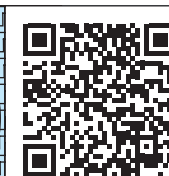
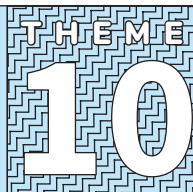


Shape Explorers

Overview



Art of learning



OVERVIEW OF THEME 10

GOALS Discover shapes in various settings – inside, outside and in artworks and explore their properties. Create an exhibition of geometric artworks. Through this process students' confidence and understanding of the properties of shapes and of prepositions increases.

SUMMARY The class will be Shape Explorers. In the warm-up, they will develop an understanding of different prepositions and the properties of shapes. Inside and outside, they will work through a series of challenges received in letters and via a news flash. They will find shapes, explore their properties and record them in Shape Discovery Books. They will explore geometry in art and create their own geometric masterpiece.

GENERAL GUIDANCE ON THE THEME 10: The goals are to support students to learn about 2D geometric shapes, to find them in the world around them, to investigate their properties and also to learn about prepositions. If possible, offer students the opportunity to work with more challenging shapes. This may mean that they might not always get things right but they should begin to develop more knowledge and awareness of the properties of less familiar shapes.



THEME 10	DAY 1	DAY 2	TEACHER LED DAY 3-4	DAY 5	DAY 6
Content Summary	<p>Warm-up: Students only obey the commands of the Queen by selecting and showing the correct 2D shape.</p> <p>Main activity: The class receives a letter. Students use 2D Shape Finders to explore shapes inside, and record them in their Shape Discovery Books. They explore the properties of a secret shape which other groups have to guess.</p> <p>Reflection: The students share a shape which reflects how they feel.</p>	<p>Warm-up: Students only obey the commands of Dracula by selecting and showing the correct 2D shape in the right position.</p> <p>Main activity: The class receives another letter. Students use 2D Shape Finders to explore shapes outside, and record them in their Shape Discovery Books. They compare their findings with those from the previous day and they create a map of their findings.</p> <p>Reflection: The students share a shape which reflects how they feel, and draw the shape on a partner's back. Students guess their partner's shape.</p>	<p>Warm-up: Students only obey the commands of Dracula or The Queen by selecting and showing the correct 2D shape in the right position.</p> <p>Main activity: See suggestions for activities.</p> <p>Reflection: The students share a shape which reflects how they feel – see ideas for how this might be adapted.</p>	<p>Warm-up: Students only obey the commands of the Queen by selecting and showing the correct 2D shape of the right colour and in the right position.</p> <p>Main activity: The class receives another letter. Students use 2D Shape Finders to explore shapes in a range of geometric artworks, and record them in their Shape Discovery Books. They receive a news alert and work in groups to select their best shapes and begin creating a practice artwork.</p> <p>Reflection: The students share a shape and a colour which reflects how they feel, and draw the shape on a partner's back and colour it in. Students guess their partner's shape and colour.</p>	<p>Warm-up: Students only obey the commands of Dracula (and not the Queen) by selecting and showing the correct 2D shape of the right colour and in the right position.</p> <p>Main activity: The class explores professional geometric art. In groups they create a geometric masterpiece and give it a title.</p> <p>Reflection: The students select a shape which reflects how they feel. Standing back to back with a partner they draw the shape on a piece of card, holding it close to their partner's ear so they can hear the shape being drawn. Students guess their partner's shape based on its sound.</p>
Space	Classroom with space for the Golden Chest.	Open space or classroom.	Open space or classroom.	Open space or classroom.	Open space or classroom.
Materials	<ul style="list-style-type: none"> Envelope/pocket containing a set of geometric shapes for each student. Golden Chest. 2D Shape Finders – a set for each group. 	<ul style="list-style-type: none"> Envelope/pocket containing a set of geometric shapes for each student. Golden Chest. 2D Shape Finders – a set for each group (include any new ones to offer challenge). 	<ul style="list-style-type: none"> Envelope/pocket containing a set of geometric shapes for each student. Golden Chest. 	<ul style="list-style-type: none"> Envelope/pocket containing a set of geometric shapes for each student. Golden Chest. 2D Shape Finders – a set for each group (include any new ones to offer challenge). 	<ul style="list-style-type: none"> Envelope/pocket containing a set of geometric shapes for each student. Golden Chest. 2D Shape Finders – a set for each group (include any new ones to offer challenge) Shape Discovery Book for each student.

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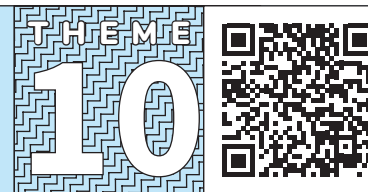
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Shape Explorers

Overview



Art of learning



THEME 10	DAY 1	DAY 2	TEACHER LED DAY 3-4	DAY 5	DAY 6
<p>Materials</p> <ul style="list-style-type: none"> • Flipchart/Whiteboard and writing utensils. • Shape Discovery Book for each student. • Pen/pencil for each student. • A letter for the class. 	<ul style="list-style-type: none"> • Flipchart/whiteboard and writing utensils. • Shape Discovery Book for each student. • Pen/pencil for each student. • A letter for the class. • Numbers to be placed around the playground (either with chalk or written on paper) • Numbers written on small pieces of paper for the groups.. • Large sheets of paper (A1 or A2) – 1 sheet per group. • A ruler for each student. • Lots of coloured pens or pencils. 	<ul style="list-style-type: none"> • Other materials based on which activity ideas are selected. 	<ul style="list-style-type: none"> • Shape Discovery Book for each student. • A pen/pencil for each. • A letter for the class. • Large sheets of paper (A1 or A2) – 1 sheet per group. • A ruler for each student. • Lots of coloured pens or pencils. • Lot of copies of the geometric artwork (see separate document). • News alert note/scheduled reminder on mobile phone. 	<ul style="list-style-type: none"> • A pen/pencil for each. • A letter for the class. • Large sheets of paper (A1 or A2) – 1 sheet per group. • A ruler for each student. • Lots of coloured pens or pencils. • Lot of copies of the geometric artwork (see separate document). • Drawing pins. • A piece of heavy card for each student. • A marker pen or felt pen for each student. 	
<p>Preparations in advance</p> <p>Cut out the geometric shapes each student needs (one set per student). (Note: these will need to be made well in advance.)</p> <p>These should be made from card in a range of bright colours:</p> <ul style="list-style-type: none"> • 2 circles (1 large, 1 small) of different colour, • 2 equilateral triangles of the same size and colour and another larger triangle of a different colour • 2 squares (1 large, 1 small) of different colours, • 4 rectangles (2 large, 2 small) of different colours, • 1 oval, • 1 diamond. • More complex shapes like pentagons, octagons, hexagons, trapezoids and parallelograms can be added depending on the ability of the students. • Make a pocket/envelope (which could be made from spare golden paper) for each student – the student’s name should be written on the front. Insert a set of geometric shapes inside. • Transform the students’ Sound Catcher books into Shape Discovery Books. • Create a letter for the class in a large envelope with the name/number of the class written on it and place it inside the envelope. This goes into the Golden Chest. 	<ul style="list-style-type: none"> • Insert any new geometric shapes for the warm-up into the envelopes/pockets for each student. • Put the pockets/envelopes in the Golden Chest. • Create a letter for the class in a large envelope with the name/number of the class written on it and place it in the envelope. • Create groups of numbers to go into the envelope. • Place the envelope in the Golden Chest. • Create group numbers to go into the playground – they can be printed on paper or drawn in chalk on the playground. • Prepare the large sheets of paper for the map (A1 or A2) – 1 sheet per group with an X marked on to which illustrate the starting point for each of the groups (a small number of other physical features might also be marked/written on the paper if necessary). 	<ul style="list-style-type: none"> • Insert any new geometric shapes for the warm up into the envelopes/pockets for each student. • Put the pockets/envelopes in the Golden Chest. • Other preparations based on which activity ideas are selected. 	<ul style="list-style-type: none"> • Insert any new geometric shapes for the warm up into the envelopes/pockets for each student. • Put the pockets/envelopes in the Golden Chest. • Create a letter for the class in a large envelope with the name/number of the class written on it and place it in the envelope. • Prepare the news alert note or scheduled reminder/email on mobile. • Print out lots of colour copies of the geometric artworks (see separate document) so that students can have at least one available to them with spares also. 	<ul style="list-style-type: none"> • Insert any new geometric shapes for the warm up into the envelopes/pockets for each student. • Put the pockets/envelopes in the Golden Chest. • A piece of heavy card for each student – if using recycled cardboard, cut this out in advance. • Display the practice sheets and the geometric artwork. • Prepare a gallery space to display the final geometric masterpieces 	

Shape Explorers

Session 1

TIME

90 min.
including
break



Art of Learning

THEME
10



WARM-UP: THE QUEEN/DRAacula SAYS

This will happen:	Students only obey the commands of the Queen by selecting and showing the correct 2D shape.
Materials needed:	Pocket/envelope with students' names written on the front and containing a set of geometric shapes. Golden Chest.
Preparations in advance:	<p>Cut out the geometric shapes – a set for each student. (Note: these will need to be made well in advance.) These should be made from card in a range of bright colours:</p> <ul style="list-style-type: none"> • 2 circles (1 large, 1 small) of different colours. • 2 equilateral triangles of the same size and colour and another larger triangle of a different colour. • 2 squares (1 large, 1 small) of different colours. • 4 rectangles (2 large, 2 small) of different colours. • 1 oval. • 1 diamond. <p>(More complex shapes like pentagons, octagons, hexagons, trapezoids and parallelograms can be added depending on the ability of the students.) Make a pocket/envelope (which could be made from spare golden paper) for each student – the student's name should be written on the front. Insert a set of geometric shapes inside.</p>
Preparations in the space:	Put the pockets/envelopes in the Golden Chest along with the items needed for the main activity.
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. The Golden Chest is placed where all the students can see it and the adult begins by explaining that some new discoveries have been found in it and that it is very full! They carefully open the Golden Chest and reveal lots of pockets/envelopes, each of which has the name of one of the students on it. They are handed out but the students are asked not to look inside just yet. Once everyone has received their envelope, the students are invited to open it and look inside. The adult asks them what they have been given. They explain that these shapes have an important name – they are called 2D geometric shapes.
2. All the students are invited to find a space (this can be in a circle or standing behind a desk). They are asked to place their geometric shapes down. The adult also has a set. They are asked if they can remember anything about Dracula and the Queen (this was used in Theme 2 – In our Homes and in Theme 7 – In Your Shoes). The students are told that they must follow the commands of the Queen but when the command doesn't come from the Queen, the students must not follow it.
3. So if the adult says, "The Queen commands you to find a circle," and also holds up a circle, they should find the circle and hold it up. Try this out. But if the adult says, "Find a circle," they should not find the circle.
4. The adult continues using commands from the Queen (or from no one) and the students must decide the correct ones to follow.
5. When the warm-up is finished, the students should place all their shapes back in their own envelope and the adult should place them back into the Golden Chest.

REFLECTION: SHAPE FEELINGS

This will happen:	The students share a shape which reflects how they feel.
Materials needed:	
Preparations in advance:	
Preparations in the space:	
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students come together and stand in a close circle or at tables depending on the space.
2. Ask them to close their eyes and to think about how they are feeling right now and to imagine a shape that describes their feelings.
3. The students are asked to open their eyes. Tell them that after a count of three they are all going to draw their shape in front of their bodies using one of their hands. The adult counts to three and then everyone draws their shape.
4. The adult shares their shape and how they feel. Then invite the students to share their shape and/or their feelings – this is an invitation and students may choose not to share and that is okay.

NOTES

Shape Explorers

Session 1

TIME

90 min.
including
break



Art of Learning

THEME
10



MAIN ACTIVITY: SHAPE EXPLORERS INSIDE

This will happen:	The class receives a letter. Students use Shape Finders to explore shapes inside and they record them in their Shape Discovery Books. They describe a secret shape which other groups have to guess.
Materials needed:	2D shape finders – each group will need a full set of the selected shapes. Flipchart/whiteboard/smartboard and writing utensils. Shape discovery books. Pen/pencil (one for each student). Golden Chest. A letter for the class.
Preparations in advance:	2D shape finders. These will be provided or will need to be prepared well in advance. Select which shapes to use including some familiar shapes and at least one that is a challenge. Transform the students' sound catcher books into shape discovery books. Create a letter for the class in a large envelope with the name/number of the class written on it and write the letter below and place it inside. <i>Dear Class</i> <i>We know that you are brilliant Sound Detectives and so we have new challenges for you all – we want you to be Shape Explorers. You will need some new tools to help you in your important work, these are called Shape Finders and you will use these to explore shapes in and around your school. Your Sound Catcher Books are now transformed into Shape Discovery Books to record the shapes you discover. Are you ready to get started as Shape Explorers?</i>
The space looks like this:	Classroom.

GUIDANCE:

- Gather the students around the Golden Chest and explain that some other interesting objects have been found in the chest. The 2D shape finders are introduced to all the students with no explanation (the adult should look carefully at them with real curiosity) and they are passed around so that everyone gets the chance to look at them.
Ask the students:
 - What do they think these are for?
 - What do they remind them of? (If necessary, they are reminded of the Golden Chest when they were being Sound Detectives and used the magnifying glasses.)
 - What might they be doing today?
- At this point the adult stops and says that they forgot to mention they also found a letter addressed to the class inside the Golden Chest, and asks if they should read it and see what it says. The letter is opened and read out slowly and seriously to the class and the adult asks if everyone is ready to get started, explaining that they will need to have their eyes wide open and their brains really switched on.
- The students are placed into small groups of 3, each has a set of 2D shape finders. From where they are standing/sitting, they are asked to look through their shape finders to see if they can find any shapes that match. After 5-10 minutes, invite the students to share any of their initial discoveries.
- Explain that they have made a good start as explorers but in this important role they must work together well as a group and also begin to record their findings. The adult carefully gives each student their Shape Discovery Book (taken from the Golden Chest) and something to write with. They have 20 minutes (approximately) to work in their group (not individually) to continue to find shapes inside the classroom/school using the different shape finders. They are encouraged to look at the classroom/school from lots of different perspectives (up, down, under, inside, above etc). Before they begin, ask them to discuss how they are going to work as a group and to decide how they are going to record their findings in their shape discovery books. They have a few minutes to discuss and then they can start. Allow the students to work through any challenges they have and only offer support where it is really necessary and even then do so by asking questions which support them to better understand and problem solve for themselves.
- Check in with the groups and encourage them to keep searching and to try to find at least one of each shape.
- After 20 minutes or so, bring all the groups back together. Each group is asked to count how many of each shape they found. The totals for each shape are recorded on the flip chart/white board/smartboard which should have the following heading: 'Shapes we explored in the Classroom/School'. The shapes can be recorded in a number of ways: either as numbers, in the format of a bar chart, the shape itself can be drawn and replicated as many times as is necessary depending on how many they discovered, or draw the actual shape and write the number they discovered inside it (the adult can choose the approach which will work best for the class and they also decide whether they or the students do the writing up/recording.)
- Ask the students to look at their information on the flip chart/whiteboard/smartboard. What do they notice? It may be that as explorers they found lots of one type of shape and not very many of another – why is that? Which shapes were the easiest to find and the hardest – why is that?
- Individually: Ask the students to think of one of the shapes - but keep it a secret! Think of the shape and try to describe it without saying its name or showing it.
- If there is time, have students go in pairs. Each student gets 1 minute to describe their secret shape (without saying its name, pointing to it or showing it.). The other student in the pair then guesses. Switch.
- Next ask each group to find a space to work in. Once they are settled, explain that they are going to share their description of their secret shape with their group. It is one of the shapes they have just discovered (the name of the shape can be whispered to the group or revealed as a drawing). The group must keep the shape a secret and not call out its name or share it with anyone outside their group (note: the same shape may need to be allocated to more than one group). In their groups the adult asks the students to think carefully about their shape and discuss what they know about it, where they might see this shape and how they would describe it without actually showing it or calling its name out. The students are given time to work on this.
- For the next part, each adult will work with half of the groups. After say 10 minutes, state that each group is going to present what they know about their shape to some of the other groups but they must continue to keep the name of the shape a secret. The other groups must think about the information they have been given and try to guess what the shape is. Each group presents all the information about their shape before the others are invited to guess.
- The whole class comes together and the adult thanks the class for being great shape explorers. Explain that the information they shared about their shapes also has another name which is 'properties', adding that different shapes have different properties, for example, a circle is round, all points are an equal distance from the centre point, it is flat which also means it is a two-dimensional shape, lots of plates are the shape of circles, wheels are also.

Shape Explorers

Session 2

TIME

90 min.
including
break



Art of learning

THEME
10



WARM UP: THE QUEEN/DRAacula SAYS

This will happen:	Students only obey the commands of Dracula by selecting and showing the correct 2D shape in the right position.
Materials needed:	Golden Chest. Each student's pocket/envelope contains a set of geometric shapes.
Preparations in advance:	New more complex geometric shapes can be added into the students' pockets/envelopes.
Preparations in the space:	Put the pockets/envelopes in the Golden Chest along with the items needed for the main activity.
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students find a space as in Session 1 (this can be in a circle or standing behind a desk). The Golden Chest is opened again and each student is given their pocket/envelope with the set of geometric shapes and the adult also has a set.
2. The students are told that today they must follow the commands of the Dracula but when the command does not come from him the students must not follow it
3. So, if the adult says, "Dracula commands you to find a circle," which the adult holds up, they should follow the command. Try this out.
4. The adult also explains that there also are extra commands that they must obey this time but only if "Dracula commands them". They say, "Dracula commands you to find a circle and put it above your head". Try this out. If Dracula does not command it, they should resist.
5. The adult continues using commands from Dracula (or from no one) using a range of prepositions (above, below, between, under, around, on, in, beside, near, far, on top of, beneath, inside, outside, next to) and the students must decide the correct ones to follow.
6. When the warm-up is finished, the students should place all their shapes back in their own envelope and the adult should place them back into the Golden Chest.

REFLECTION: SHAPE FEELINGS

This will happen:	The students share a shape which reflects how they feel, they draw the shape on a partner's back. Students guess their partner's shape.
Materials needed:	
Preparations in advance:	
Preparations in the space:	
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students come together and stand in a close circle or at tables depending on the space.
2. Ask them to close their eyes and to think about how they are feeling right now and to imagine a shape that describes their feelings.
3. The students are asked to open their eyes. Tell them to find a partner quickly – it should be someone next to them or very close. They should decide who will be A and who will be B.
4. Say that A will go first and demonstrate how they will draw the shape they have chosen on their partner's back with one finger. Student A must not reveal the name of the shape and Student B must not reveal what they think the shape is. When all the As have finished, invite the students to swap and remind them that the shape must not be revealed and no guessing should be shared.
5. Once all the Bs have finished their shapes, the students are invited to face each other and the adult invites Student B to guess the shape of Student A – they must not say if the guess is right or wrong. The students swap and Student A guesses the shape of Student B. Only then does the adult tell the students that they can share if the guesses were right or wrong.
6. Ask the students:
 - How well did they do with their guessing?
 - What helped them to guess the shape?
 - What were they thinking when the finger was drawing on their back?
 - Which shapes did they choose and why?

NOTES

Shape Explorers

Session 2

TIME

90 min.
including
break



Art of Learning

THEME
10



MAIN ACTIVITY: SHAPE EXPLORERS OUTSIDE

This will happen:	The class receives another letter. Students use Shape Finders to explore shapes outside, they record them in their shape discovery books. They compare their findings with those from the previous day and they create a map of their findings.
Materials needed:	2D shape finders – each group will need a full set of the selected shapes (include any new ones to offer challenge). Flipchart/whiteboard/smartboard and writing utensils. Shape discovery books and pen/pencil (one for each student). Golden Chest. A letter for the class. Group numbers to go into the playground. Large sheets of paper (A1 or A2) – 1 sheet per group. A ruler for each student. Lots of coloured pens or pencils.
Preparations in advance:	<p>Create a letter for the class in a large envelope with the name/number of the class written on it and write the letter below and place it inside.</p> <p><i>Dear Class, You have made a brilliant start as Shape Explorers and we have more work for you to do. In this envelope you will find some numbers - there is one for each group. Your first challenge is to find your group number in the playground [or another space]. This is where you will begin. Using your Shape Finders we need you to work together as a group to discover more shapes. All the shapes you find must be recorded in your shape discovery book – you can write down what they are and their shape names or you can draw them. Your group should try to find at least 10 shapes but there should be as many different types of shapes as possible – all of one shape just won't do! But so that we know where to find them again you need to record where you found them – you might want to use some of the words from the warm up if that helps! [this task can be removed if it is really too difficult] Are you up for the challenge?</i></p> <p>Group numbers to go into the envelope with the letter. Place the envelope in the Golden Chest. Group numbers to go into the playground – they can be printed on paper or drawn in chalk on the playground. Prepare the large sheets of paper for the map (A1 or A2) – 1 sheet per group with an X marked on to which illustrate the starting point for each of the groups. (A small number of other physical features might also be marked/written on the paper if necessary.)</p>
Preparations in the space:	Place the group number in different places in the playground.
The space looks like this:	Classroom and outdoor space.

GUIDANCE:

- The adult opens the Golden Chest once again and says that another letter for the class has arrived. The letter is opened and read out slowly and seriously to the class. Ask them:
 - What do they think about this challenge?
 - What is it that they have to do?
 - How will they record the shapes in their shape discovery books?
 - How might they record where they found the shapes? [only if this task is included in the letter].The adult can remind the students of the warm-up and the words that were used. They can share an example and/or ask the students for an example. For example, the window is a rectangle and it is IN our class. The sun is a circle and it is ABOVE us in the sky. The main instructions in the letter are shared again as a reminder.
- Ask the students to get into the same groups as yesterday. The adult again opens the Golden Chest and hands out the shape discovery books and a set of 2D Shape Finders for each group (new shapes may be introduced for this session). Each group then selects a number from the envelope. Ask the groups to discuss the task and to plan how they might work together to complete it. The adults offer support to groups if necessary.
- The students are invited to go outside to begin the task. They should be given time to work on it and to solve problems for themselves but the adults should check in and offer support where needed.
- After 25 minutes, the groups are told that they have 5 minutes left and then when the time is up, everyone goes back inside. Each group is asked to count how many of each shape they have found. The totals for each shape are recorded on the flip chart/white board/smartboard which should have the following heading: 'Shapes we explored outside'. The shapes can be recorded in a number of ways: either as numbers; in the format of a bar chart, the shape itself can be drawn and replicated as many times as is necessary depending on how many they discovered, or draw the actual shape and write the number they discovered inside it (the adults choose the approach which will work best for the class and they also decide whether they or the students do the writing up/recording).
- Ask the students to look at their information on the flip chart/whiteboard/smartboard. What do they notice? It may be that as explorers they found lots of one type of shape and not very many of another – why is that? Which shapes were the easiest to find and the hardest – why is that? Were any shapes impossible to find – where else might they have found these shapes?
- The adult then shows the findings from Session 1 'Shapes we explored in the Classroom/School' and asks:
 - What do they notice when they see the findings side by side?
 - Did they find the same shapes inside and outside?
 - Which shapes did they find the most of? Why?
- Next, say that each group is going to work together to create a map of the shapes they explored outside and all the maps will be displayed to help other shape explorers. Show the large sheets of paper and ask the students what the X means. This is the place where their group began [a small number of other physical features might also be marked/written on the paper if necessary]. State that each group should try to remember their expedition and record on the map where they found each of their shapes and then draw them on the paper. Offer the students a choice as to how they draw their shapes – free hand, with a ruler or they can use their Shape Finders as a template (this should take around 20 minutes).
- The class comes back together. Invite each group to show their map. Each group is thanked for their work and the maps are later put on display (the maps may be further developed/improved during Sessions 3 and 4). If time is short, each adult can work with half of the groups in the final part.

Shape Explorers

Session 3-4

TIME

90 min.
including
break



Art of learning

THEME
10



WARM-UP: THE QUEEN/DRACULA SAYS

This will happen:	Students only obey the commands of Dracula or The Queen by selecting and showing the correct 2D shape in the right position.
Materials needed:	Golden Chest. Each student's pocket/envelope contains a set of geometric shapes.
Preparations in advance:	New more complex geometric shapes can be added into the students' pockets/envelopes.
Preparations in the space:	Put the pockets/envelopes in the Golden Chest along with the items needed for the main activity.
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students find a space as in Session 1 (this can be in a circle or standing behind a desk). The Golden Chest is opened again, and each student is given their envelope with the set of geometric shapes and the adult also has a set. The adult continues to develop and increase the difficulty of the warm-up. This could be by:
 - Changing whose commands the students should obey (Dracula's or the Queen's).
 - Removing some of the physical clues (so not holding up the shape but just saying it instead).
 - Introducing more complex shapes.
 - Introducing new or more challenging prepositions.
 - Mixing up the prepositions (so 'above' means 'below', 'near' means 'far', 'in front' means 'behind').

REFLECTION: SHAPE FEELINGS

This will happen:	The students share a shape which reflects how they feel.
Materials needed:	
Preparations in advance:	
Preparations in the space:	
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. Repeat the reflection from Session 1 and 2 and/or change it in some way or increase its difficulty by:
 - Making a sound that goes with the shape they feel.
 - Drawing the shape on a different body part.
 - Drawing the shape very small or as big as possible.
2. Reflect using any questions from the previous sessions that are relevant or others that might be interesting to explore.

NOTES

Shape Explorers

Session
3-4

TIME

90 min.
including
break



Art of learning

THEME
10



IDEAS FOR TEACHER-LED MAIN ACTIVITIES

The space looks like this: Classroom

GUIDANCE:

Consider placing the challenges/activities in the Golden Chest as a way of introducing them in a nice way to the students.

Session 2 continuation

The groups can improve/develop their maps from Session 2 by colouring them in, adding more details or by adding any shapes that were missed in Session 2.

Shape names

Challenge the students to recreate their own name using only shapes to form the shape of each letter (the shapes can be whole or parts of shapes). This can be used as part of the exhibition of their work.



Shapes making other shapes

Challenge the students to draw shapes using other shapes:

- Draw a circle using only squares.
- Draw a triangle using only circles.
- Draw a heart using only squares.
- Draw a diamond using lots of other shapes but no diamonds!

Tangram challenge

Explain that a tangram is made up of a square cut into the same 7 pieces. Give each student a tangram template and ask them to make each of the shapes a different colour. Then offer them a choice about which challenge they would like to try:

- Can they make the first letter of their name with the tangram?
- Can they make other squares using some of the pieces?
- How many squares can they make?
- What is the smallest square they can make and the largest?
- Which animal can they make using all the pieces from a tangram?

Their work can either be pasted into their shape discovery books or displayed.

A tangram template is available for use:

Tangram youtube video: <https://www.youtube.com/watch?v=NorbweaqIjc>.



The purpose of shapes

Using their shape discovery books, ask students to work in groups to find shapes, identify what their purpose is and how useful they are:

- What is the purpose of a circle? How useful is it?
- What is the purpose of a square? How useful is it?

Beautiful and ugly

Offer the students lots of different coloured paper and ask them to cut out shapes and stick them on paper to make:

- Something beautiful with shapes.
- Something ugly with shapes.
- Arrange shapes in a tidy way – is tidy beautiful?
- Arrange shapes in a messy way – is messy ugly?

Cut and paste

Offer the students lots of different coloured paper and scissors. Ask them to cut out lots of different shapes including some which are the same shape and size. Then ask them to see what new shapes they can make by putting shapes together. They can be challenged to take shapes of the same shape and size and make a new shape, for example 2 triangles to make a diamond or a square.

They can glue their shapes into their shape discovery books.

NOTES

Shape Explorers

Session 5

TIME

90 min.
including
break



Art of learning

THEME
10



WARM-UP: THE QUEEN/DRAcula SAYS

This will happen:	Students only obey the commands of the Queen by selecting and showing the correct 2D shape of the right colour and in the right position.
Materials needed:	Golden Chest. Each student's pocket/envelope contains a set of geometric shapes.
Preparations in advance:	New more complex geometric shapes can be added into the students' pockets/envelopes.
Preparations in the space:	Put the pockets/envelopes in the Golden Chest along with the items needed for the main activity.
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students find a space as in the previous session. The Golden Chest is opened again, and each student is given their envelope with the set of geometric shapes and the adult also has a set.
2. The students are told that today they must only follow the commands of the Queen.
3. So, if the Queen commands, "Find a RED circle and put it above your head," they should follow the command. [Notice that a colour has also been added and the adult no longer shows the shape to the students so the warm-up is more complex]. Try this out.
4. The adult continues using commands from the Queen or from no one using a range of different shapes, colours and prepositions (above, below, between, under, around, on, in, beside, near, far, on top of, beneath, inside, outside, next to) and the students must decide the correct ones to follow.
5. When the warm-up is finished, the students should place all their shapes back in their own envelope and the adult should place them back into the Golden Chest.

REFLECTION: SHAPE FEELINGS

This will happen:	The students share a shape and a colour which reflects how they feel. They draw the shape on a partner's back and colour it in. Students guess their partner's shape and colour.
Materials needed:	
Preparations in advance:	
Preparations in the space:	
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students come together and stand in a close circle or at tables depending on the space.
2. Ask them to close their eyes and to think about how they are feeling right now and to imagine a shape that describes their feelings. They should also think about what colour the shape would be.
3. The students are asked to open their eyes. The adult tells them to find a partner quickly – it should be someone that they have not worked with in the session today. They should decide who will be A and who will be B like yesterday.
4. Say that this time B will go first and remind the students that they should draw the shape they have chosen on their partner's back with one finger. Today it is a bit more difficult as they also have to use their figure to add their chosen colour to the shape. Student B must not reveal the name of the shape or their colour and Student A must not reveal what they think the shape is or its colour. Once all the first round is over, invite the students to swap roles but again the name and colour of the shape must not be revealed and no guessing should be shared.
5. Once all the pairs have finished, the students are invited to face each other and the adult invites Student A to guess the shape and colour of Student B – they must not say if the guesses are right or wrong. The students swap and Student B guesses the shape and colour of Student A. Only then does the adult tell the students that they can share if the guesses were right or wrong.
6. Ask the students:
 - How well did they do with their shape guessing?
 - How well did they do with their mind reading of the colours? Can they remember a time when they have been mind readers before? (This was in the Friendship Theme.)
 - What helped them to guess the shape and what helped them guess the colour?
 - What were they thinking when the finger was drawing on their back?
 - Which colours did they choose and why? [Perhaps refer back to the Mind Reading activity previously.]

NOTES

Shape Explorers

Session 5

TIME

90 min.
including
break



Art of learning

THEME
10



MAIN ACTIVITY: SHAPE EXPLORERS OF ART – PART 1

This will happen:	The class receives another letter. Students use Shape Finders to explore shapes in a range of geometric artworks, and they record them in their shape discovery books. They receive a news alert and work in groups to select their best shapes and begin creating a practice artwork.
Materials needed:	2D shape finders – each group will need a full set of the selected shapes (including any new ones to offer challenge). Shape discovery books. A pen/pencil (one for each student). Golden Chest. A letter for the class. Large sheets of paper (A1 or A2) – 1 sheet per group. A ruler for each student. Lots of coloured pens or pencils. Copies of geometric artworks. News alert note.
Preparations in advance:	<p>Create a letter for the class in a large envelope with the name/number of the class written on it and write the letter below and place it inside.</p> <p><i>Dear Shape Explorers,</i> <i>Today we have another important challenge for you and to complete this you will need your Shape Finders and your shape discovery books. You will also have lots of different coloured pens/pencils to work with. You will be working on your own and your challenge is to find as many different types of shapes as possible in some of the world's most beautiful geometric artworks (you will find these in this letter!). Use all of your Shape Finders to explore these artworks very very carefully. Find shapes that really interest you and record them beautifully and accurately in your shape discovery book. You should try to write the name of the shape and also which artists the shape belongs to. Are you up for the challenge?</i></p> <p>Prepare the following small note: NEWS ALERT NEWS ALERT – there is a world shortage of excellent geometric artworks and more are needed urgently – can you help? Print out lots of colour copies of the geometric artworks so that students can have at least one available to them with spares also.</p>
The space looks like this:	Classroom

GUIDANCE:

1. Explain that another letter has arrived for the class. The students gather together and the letter is read out slowly and seriously and the copies of the print outs of the geometric artworks are passed around.
Ask the class:
 - What do they notice about these artworks?
 - What do they think a geometric artwork is?
 - What is the writing under each of the artworks about? What does deceased mean?
 - What is it that they have to do?The main instructions in the letter are shared again as a reminder.
2. Hand out the shape discovery books. The sets of 2D Shape Finders, the coloured felt pens and coloured pencils and the copies of the artworks are placed around the space in easy reach of the students.
3. The students are invited to begin the task. The adults should check in with each of the students, noticing what they are doing and reminding them of the task, that they need to use all the Shape Finders and that their work should be beautiful and accurate. They are also encouraged to write the name of the shape and the artist. Support is offered where needed.
4. After 25 minutes, the students are told that they have 5 minutes left and then when the time is up, everyone stops work.
5. Put the students into small groups of 3 and explain that in turn each person in the group should show the geometric shapes they have just drawn in their shape discovery books. The others in their group look at them carefully and together they must select a total of 3 shapes that they like best. The owner of the book is asked to mark the chosen shapes by placing small dots next to them with a coloured felt pen or pencil. At the end of this each group will have 9 shapes in total (3 from each shape discovery book).
6. Next the adult is handed a note (or “receives” one on their phone). They stop the class and they read it out. It states: ‘NEWS ALERT NEWS ALERT – there is a world shortage of excellent geometric artworks and more are needed urgently – can you help?’ Remind the class that they have been working hard on geometric shapes and that just now in their groups they have decided on the very best ones. Challenge the class to create some new artworks to meet the shortage and ask:
 - Can they meet this challenge?
7. Each group is then given a large sheet of paper (A1 or A2) and the adult explains that this is their practice paper and they ask the students – What is a practice paper for? The students are asked to look closely at the artworks once again and to begin to compose/create their own geometric artwork using only their 9 chosen shapes. They continue working on their practice sheet until it is time to move onto the reflection. Tell them that they will have more time in the next session to look again at their practice artwork and then finally to create their final artwork masterpieces.

NOTES

Shape Explorers

Session 6

TIME

90 min.
including
break



Art of learning

THEME
10



WARM-UP: THE QUEEN/DRAacula SAYS

This will happen:	Students only obey the commands of Dracula (and not the Queen) by selecting and showing the correct 2D shape of the right colour and in the right position.
Materials needed:	Golden Chest. Each student's pocket/envelope contains a set of geometric shapes.
Preparations in advance:	New more complex geometric shapes can be added into the student's pockets/envelopes.
Preparations in the space:	Put the pockets/envelopes in the Golden Chest along with the items needed for the main activity.
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

Warm up

1. All the students find a space as in the previous session. The Golden Chest is opened again, and each student is given their envelope with the set of geometric shapes and the adult also has a set.
2. The adult explains the warm-up today is going to be really difficult and the students are going to have to concentrate really really hard. They must only follow the commands of Dracula but the Queen might also command them to do something but they should not obey these commands.
3. The adult also explains that Dracula has forgotten the names of the shapes and so he will only describe the shapes.
4. So, if Dracula commands, "Find a shape with 4 sides, it should be red and put it between your knees," they should follow the command. Try this out. If the adult asks, "If the Queen commands you to find a shape with 4 sides, it should be red and put it between your knees," what should they do?
5. Continue using commands from the Queen and Dracula describing the properties of different shapes, using different colours and prepositions (above, below, between, under, around, on, in, beside, near, far, on top of, beneath, inside, outside, next to) and the students must decide the correct commands to follow.
The complexity of this can be reduced if necessary or more complexity added (for example, find two shapes that together form a square, or two shapes that together form a diamond).

NOTES

REFLECTION: SHAPE FEELINGS

This will happen:	The students select a shape which reflects how they feel. Standing back to back with a partner, they draw the shape on a piece of card holding it close to their partner's ear so they can hear the shape being drawn. Students guess their partner's shape based on its sound.
Materials needed:	A piece of heavy card for each student (this can be from recycled cardboard). A marker pen or felt pen for each student.
Preparations in advance:	If using recycled cardboard, cut this out to create a sheet for each student.
Preparations in the space:	
The space looks like this:	Students are in a circle or standing behind desks.

GUIDANCE:

1. All the students come together and stand in a close circle or at tables depending on the space.
2. Ask them to close their eyes and to think about how they are feeling right now and to imagine a shape that describes their feelings over this whole theme.
3. The students are asked to open their eyes. The adult tells them to find a partner quickly – it should be someone that they have not worked with in the session yesterday or today. They should decide who will be A and who will be B.
4. Explain that in this reflection they are going to need to open their ears as much as possible as they are going to listen very carefully to their partner's shape and try to guess it. The adult (who states they are A) demonstrates by standing back to back with a partner (B) who has their eyes tightly closed. Using the card and marker/felt pen, they hold it as close to one of their partner's ears as possible and they slowly draw their reflection shape. When they are finished drawing, they place their drawing face down on the floor. They explain the roles then swap. The students are reminded not to reveal their shape to their partner.
5. Each student is given some card and a pen. They are quickly reminded of the instructions – stand back to back, B closes their eyes tightly and A draws their shape, the shape is placed face down and when instructed by the adult, they swap roles.
6. The students are invited to begin. Only when all the As have finished their drawings and placed them face down does the adult invites them to swap roles. Once all Student Bs have finished their drawings and placed their pictures face down, the adult then invites the students to share their guesses but they must not say if they are right or wrong. The adult counts to three and the drawings are revealed.
7. Ask the students:
 - How well did they do with their shape guessing?
 - Is it really possible to hear shapes?
 - How did they do it? What did they notice?
 - What new things do they know about shapes and where things are located?
 - Which shapes do they know better now?
8. Finally, each of the geometric shapes worked on is called out and together the class creates a noise for it.

Shape Explorers

Session 6

TIME

90 min.
including
break



Art of learning

THEME
10



MAIN ACTIVITY: SHAPE EXPLORERS OF ART - PART 2

This will happen:	The class explores their practice sheets. In groups they create a geometric masterpiece and give it a title.
Materials needed:	2D shape finders – each group will need a full set of the selected shapes (including any new ones to offer challenge). Shape discovery books. Large sheets of paper (A1 or A2) – 1 sheet per group. A ruler for each student. Lots of coloured pens or pencils. Copies of geometric artworks. Drawing pins.
Preparations in advance:	Display the practice sheets and the geometric artwork and prepare a gallery space to display the final geometric masterpieces.
Preparations in the space:	
The space looks like this:	Classroom.

GUIDANCE:

1. All the work in progress, practice sheets and the artworks from the previous day are displayed on tables or on the floor in easy reach. The students are invited to look at these materials for 5 minutes – and then the adult asks them to explain what they notice. If necessary, the adult also highlights interesting/special features from the group's practice sheets and also from the artworks (how shapes have been used together, repetition of shapes, placement, backgrounds, which are neatly drawn, which are more freehand, what shapes are connecting and overlapping, where there are shapes within shapes, are there lonely shapes all on their own, are there any borders around the shapes?)
2. The groups are given 10 minutes to reflect on their practice piece, to gather final ideas and to prepare to create their final geometric picture.
3. The adult gives each group another large sheet of paper (A2) and they are invited to create their beautiful geometric masterpiece using only the 9 shapes chosen (they can use each shape chosen more than once). They have 25 minutes and are given a reminder when they have 5 minutes left.
4. The groups are reminded that most artworks have a title (some from the artworks explored are shared) and the names of the artists are written either on the artwork or next to it. They are invited to spend 5 minutes coming up with a title for their artwork, to sign their names on the bottom of the paper and to include the year.
5. The artworks are displayed as if in a gallery space and the artists are thanked for their work.

NOTES