

Energy Inventions

Session 1

TIME

90 min.
including
break



Art of learning

THEME
23



TRIGGER: THE INVENTOR MISSION IS GIVEN!

This will happen:	The class receives a huge parcel. The inventor mission from the Researcher!
Materials needed:	A huge parcel with Inventor's equipment arrives (it contains glasses, a sign and possibly Inventor's white coats, quality A3 drawing paper, pencils/coloured pencils, recycled materials), a memory stick with a) a video of the Researcher and b) a PowerPoint describing the Inventor's mission. If it is not possible to include all the recycled materials in the box, the remainder of the materials can be included in Session 2 (but try to keep this fact secret from the students). For Session 2 gather lots of recycled material (to include wood, plastic, metal, etc. Preferably this should be from electronic devices and cables (from a recycling station or similar), old shoes, figurines, toys etc that can be taken apart and repurposed. Also include milk cartons and other materials which students would not normally be allowed to use. Include any other materials or resources left over from other AoL themes.
Preparations in advance:	Record film clips, fill the parcel and edit the PowerPoint to fit the class and its context. Seal the parcel and make a postage label for the class.
Preparations in the space:	
The space looks like this:	Classroom/Open space

GUIDANCE:

A huge parcel addressed to the class has arrived. On top of the box is a memory stick and a label which says, 'Look at this first'.

On the memory stick there is a) a video of the Researcher from Theme 2, who is asking for help from the class and b) A PowerPoint describing the mission.

In the parcel there is Inventor's equipment (glasses, a sign, white coats, A3 drawing paper, pencils, coloured pencils, and lots of recycled materials – these can be supplemented with extra materials from Session 2).

- Ask the students to listen to the video, look at the parcel and decide whether they want to carry out the mission.
- Do the inventor warm-up (see warm-up).

WARM UP: INVENTOR TRICK #1 “YES AND”

This will happen:	Create inventor stories to practise working in groups.
Materials needed:	
Preparations in advance:	
Preparations in the space:	
The space looks like this:	Open space.

GUIDANCE:

The students are divided into groups – they will remain in these groups throughout this theme. In their groups, students create a story about an imaginary invention, where they each say one sentence. After the first suggestion, all further sentences must begin with “Yes, and...” The “Yes” should be an excited YES! And what follows in the sentence should build on the previous idea. The students do what happens by miming together in pairs.

Demonstrate the warm-up, for example:

Person 1: I think we should invent a climbing egg.

Person 2: YES! And the climbing egg can have a helmet!

Person 1: YES! And the climbing egg can be attached to very steep walls...

Each group has a few minutes to try this out. Then they change the person who starts and they create a new invention story. Remind the students that this is just an exercise, that the ideas don't have to become something real, and that it's just as good if it turns out to be really and completely impossible to do.

Reflection. Ask why they think they did this? Explain that to collaborate successfully it is important to listen to the other peoples' ideas, say YES let's try that and build on them. This is what real Inventors do, and it's one of the strategies real Inventors use.

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MAIN ACTIVITY: DRAWING SKETCHES OF THEIR INVENTION

This will happen:	The students draw sketches of their invention.
Materials needed:	Large sheets of quality drawing paper A3 (one piece for each student) plus pencils and coloured pencils/markers. PowerPoint with the mission.
Preparations in advance:	Review the PowerPoint presentation and fill in the blanks.
Preparations in the space:	
The space looks like this:	Workshop room/classroom.

GUIDANCE:

- Watch the PowerPoint presentation together and discuss how best the mission can be solved.
- Divide the students into groups (they will remain in these groups throughout this theme). Dress up in the Inventor's clothes.
- Main task: Draw a sketch of the invention (see task description in PowerPoint). The students can either make one drawing of an invention each, or a group one – they need to decide on this.
- If necessary, remind them of the focus of the mission.

REFLECTION: 'THE BOND BETWEEN US'

This will happen:	The class works in a circle throwing a roll/ball of gift ribbon so that everyone is involved, and they reflect on teamwork.
Materials needed:	A roll/ball of gift ribbon and a soft ball.
Preparations in advance:	Wrap the gift ribbon around a soft ball. The gift ribbon should come off easily and be easy to catch. Practise throwing the ball to ensure that the gift ribbon comes off easily.
Preparations in the space:	
The space looks like this:	Open space.

GUIDANCE:

Everyone sits (or stands) in a tight circle (if the class is large then divide them into two smaller groups with an adult in each). It is important that it is a circle, and that the distance across the circle is not too big. The tempo of the exercise should be calm.

1. Everyone closes their eyes and is given a question to think about from today's session. When they are ready with their answer, they should open their eyes and look at the adult.
2. The adult repeats the question, takes out the ribbon ball, and begins by answering the question themselves. They hold the end of the gift ribbon firmly, make eye contact with a student and then throw the ribbon ball to them.
3. This student repeats the question, states their answer, holds the ribbon ball firmly, makes eye contact with another student, and throws the ribbon ball to them.
4. The process is repeated – everyone in the circle needs to repeat the steps and a group web will result.
5. Reflection: Whilst the web is still held by everyone in the group, ask them what has been created between them? What does this 'bond between us' tell them (Community, what they achieve when they collaborate – see what emerges). Finish the session with a positive reflection about the 'bond between us'.

Question for Session 1: Think about their inventor group and find one thing they appreciated/enjoyed in their group work today.

NOTES