

Energy Inventions

Session 2

TIME

90 min.
including
break



Art of learning

THEME
23



WARM-UP: INVENTOR TRICK #2: “YES, AND” AND “NO, 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:

In their invention groups, the students should create an invention story, where they each say one sentence and work in a fixed order. After the first suggestion, all further sentences must begin with “Yes, and...” Yes should be excited YES! And what comes next should build on the idea from the previous sentence.

Next demonstrate what happens if the partner says “No, and” instead (as below):

Person 1: The first thing we have to do to make the invention is to collect lots of wires.

Person 2: No, at least, it's not the first thing we have to do!

Person 3: No, and we don't really need more than 1 wire either...

Ask: How does it feel to be person 1 who comes up with the story idea and all they hear is NO? How will they move forward?

Each group first tries once each with “No, and...” Everyone has a go at being Person 1. Then they change to “YES, and...” and again each student takes a turn at starting a story. Challenge students to find new/ different invention ideas (for example big, small, inventions in space, inventions on the ground).

Reflection: How was it different with “No, and” and “Yes, and”? Why do they think the Inventor wanted them to do “No, and” and “Yes, and” like this?

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. Then the process is repeated and everyone is asked to reflect on question 2.
6. Finish the session with two good tips and ask everyone to remember them.

Questions for Session 2 (the ribbon is thrown back in the reverse order):

1. Ask the students to think about their inventor group: Share something one of them did that was good for group work.

Throw the ribbon back again with a new question – again in reverse order!

2. Imagine that they are a group work expert. Give a tip on what everyone can do to make a group work well.

NOTES

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MAIN ACTIVITY: BUILDING AN ENERGY INVENTION MODEL

This will happen:	The students build a model of their invention.
Materials needed:	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. Tools: pliers, scissors, glue, tape, steel wire, adhesive compound and any other left over resources.
Preparations in advance:	Find recycled materials and sort them by putting small items into boxes so that it is easy for the students to find what they need.
Preparations in the space:	'Recycling station' with access to all the material.
The space looks like this:	Workshop room with one table/one workstation for each group.

GUIDANCE:

- Based on the sketches from Session 1, the groups must make a model of their invention. They can use any of the recycled materials available.
- If necessary, remind them of the focus of the mission.

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