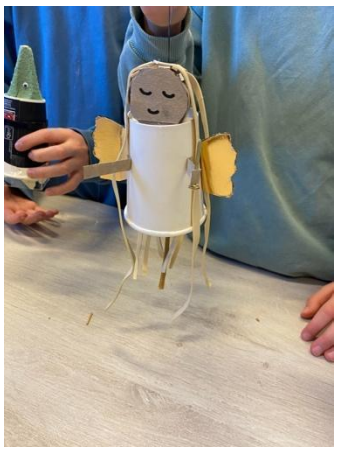
Tinker Sustainable Decoration

TINK@School

Co-funded by the Erasmus+ Programme of the European Union

Tinker Sustainable Decoration

Duration	*90 minutes*
Target group	*Students that can use scissors safely (approximately ages 8 and up)*
Connection to curriculum	*Art, sustainability, (fine motor skills and coordination)*
Particulars	*Collect cardboard boxes and other packaging material a few weeks beforehand so there are enough materials available for the students.*



Outline

In this tinker activity, students create sustainable festive decorations for an upcoming holiday. People like to decorate their homes for the holidays. With each holiday come various decorations. These decorations generally do not last long and are often bought new. With this tinker activity, students will make sustainable decorations that ties in with an upcoming holiday celebration. Everything is made with recycled materials.

Connection with sustainability

- They become aware of the fact that buying decorations for each holiday is wasteful.
- The students work with recycled materials and see that waste can be reused.

Health and safety

Hazard	Controls
Box cutters are very sharp, students can cut themselves.	*Do not let all ages use the box cutters, do not leave them lying around, instruction in advance on how to use them, always slide them in when not in use. Always use a cutting mat.*
Glue guns get very hot.	*For young ages use the glue guns only under supervision. Let the students use them in a designated place, and keep an eye on it.*

Essential materials

Item	Comment	Total (for 30 students)
Rubber bands		2 boxes
Cocktail sticks / popsicle sticks		1 or 2 packages
Paperclip		2 boxes
Rope/string		2 balls
Cotter pins		2 boxes
Cork		15
Recycled cardboard (solid)	Large packing boxes. If possible, cut in the same shapes and sizes.	Enough for all students to tinker with.
Recycled cardboard (thinner)	Materials such as: egg cartons, toilet rolls, tea boxes, biscuit packaging, cardboard cups	Enough for all students to tinker with.
Other optional recycled materials	Bubble wrap, plastic packaging, candy wrappers, chip bags, foil, wrapping paper	Enough for all students to tinker with.

Essential tools

Item	Comment	Total (for 30 students)
Scissors		15
Painter's tape		15 rolls
Glue		15
Box cutters	Use only if students can work safely.	15
Cutting mat		15
Pens/markers/pencils/wasco		30
Fret drills		5
Glue gun	Optional	1

Preparation

- Make sure there are examples to show the students, these can be homemade examples or the examples from the Appendix.
- Collect enough cardboard and other recycled materials beforehand. Make sure you don't offer too much, scarcity in materials allows creative outcomes. Provide a good variety in the materials.
- Choose a prompt for the activity and if you want the students to work in pairs or individually.

Preparing room:

- Place enough work tables throughout the classroom. The number depends on the number of the students. The students are allowed to work individually or in pairs.
- Set up two tables divided in the room. One table for all the materials, and one for the tools. This way, students have to discover the materials and tools. While walking to get the materials and tools, they can be inspired by other groups by seeing what they are working on.
- At younger ages, create a designated place for the hazardous tools (box cutters and glue gun), so that they can be used under supervision or by an adult.

Tip: Make the materials more attractive to use by cutting them the same shapes and sizes beforehand and display according to shape and size. This also works great for stimulating creativity.

Activity plan

Introduction (10 min)

Ask the students if they know the term sustainability and what it means. Explain that the term sustainable is used for products that do not harm earth and nature, and that sustainability is the concept that stands for living with happy people and animals on a healthy earth now and in the future. Small changes in daily activities can make an impact and increase awareness. Like making people more aware about an issue, recycling trash or buying secondhand clothes.

Explain to the students that people like to decorate their homes for different holidays. Engage students in conversation about different types of decorations that are hung or put up. Comment on the fact that these decorations generally do not last long and are often bought new. You can make a connection to recycling waste as mentioned earlier and pay attention to what effect buying plastic decorations has on the environment. In this activity the students are going to make sustainable decorations.

To engage the students with STEM, there are different prompts you can add to the activity:

- Create a sustainable decoration in 3D style
- Make sure there is a moving component in your sustainable decoration
- Work with balance
- Make something really big

Divide the students in pairs. Show the students the materials and tools, explain shortly.

Instruction: Create sustainable decoration (5 min)

When the students know whether they will work alone or with a partner, they can start tinkering. Encourage the children to look at the materials and tools. Let them gather the supplies and let the creativity flow. You can consider a certain theme for the decoration, which ties in with upcoming holiday celebrations.
Each student/group walks around the room and grabs the necessary materials and tools. Then they can start trying things out. It can be useful to have a few examples so students can be inspired. They have around 60 minutes to make the decoration.

Managing the activity once it is in progress (45-60 minutes)

- Pay attention to safety, students work with box cutters or scissors, which are sharp, and glue guns, which get hot.
- Indicate every 10 minutes how much time is left.
- Observe the group and see what students are working on, and whether students are frustrated or stuck.

- Ask questions to get students thinking about possible solutions or to help them articulate their goals or problems. Then ask questions that make them see for themselves where things might be going wrong or encourage them to come up with solutions.
- Encourage students to look at other groups or the material tables for inspiration.
- If applicable, put down a material that you think could move the person forward.
- Write down during the activity:
    - Funny remarks they make
    - Things that strike you
    - What they are struggling with
    - What solutions they come up with
- Let the students know when the final 10 minutes start.
- Tips for guiding this particular activity:
    - If students wish to use the glue gun, it is recommended to only use it in the last 15 minutes. (They often enjoy it so much that they start gluing for the sake of gluing and lose sight of the rest of the materials.)
    - Materials cut in the same shapes and sizes work well.
    - Scarcity in materials allows creative outcomes.
    - Show some examples to encourage creativity.
    - Focus your remarks on the process not on the aesthetics.

Clean up, make sure that materials that can be used again are not thrown away and paper scraps are collected in the paper trash.

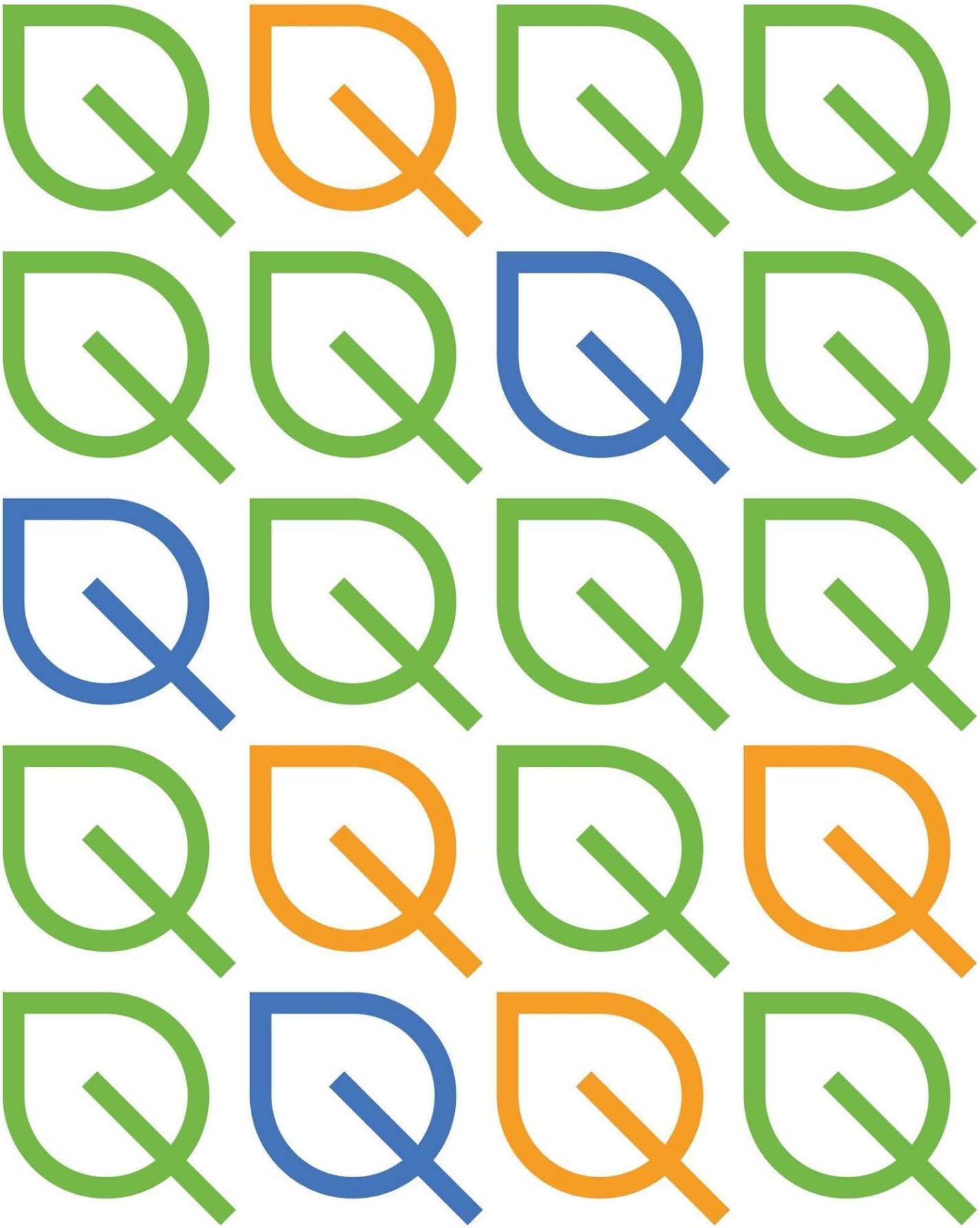
Conclusion (15)

Evaluate the activity together with the students. Give the students the opportunity to present their decorations and discuss the process. Use the notes you made during the activity in the evaluation with the students.

- Were there any difficulties?
- How did they solve them?
- What are they most proud of?
- What they found frustrating ?
- What problems did you solve? Try to not discuss the products in terms of aesthetics but focus on the tinkering and technical parts.

Ask the students why their made decoration is durable and what it might be a substitute for. Have the students explain what prompt they added to their decoration and how they did it.

Tell the group that sustainability is an important topic and put the focus on plastic. Explain to students that plastic is polluting the oceans, with all its consequences, and that this serious problem needs to be addressed. Many decorations are made of plastic and break down quickly or are thrown away after little use. Conclude the lesson with the message that the students have made decorations from recycled materials and therefore are not polluting the oceans with these decorations!



Appendix

Appendix Examples of outcomes

Colophon

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