10 quick 3D lesson ideas about

SCIENCE

MAKERS EMPIRE

3D+SCIENCE

1. What Do You Notice?

Scientists make observations. They are curious and take notice of the world around them. They think about their observations and ask questions that can be investigated.

Take students outside to make observations and challenge them to represent their observations in 3D.

2. Mix It Up

Learning about mixtures and solutions?

Challenge students to invent the machine or tool for separating components in a given mixture.

3. Ice Blocker

What is the quickest way to change water from a liquid to a solid state?

Challenge students to design ice block trays that will freeze a specific amount of water the quickest.

Do shallow trays freeze water quicker than deeper ones?

Is there a particular shape that makes the most effective ice tray?

4. Puppet Master

Design and 3D print objects that can be used as shadow puppets to explore concepts related to light.

5. Bubble Magic

Challenge students to design and 3D print bubble wands.

Use the bubble wands for students to make observations about the bubbles.

What do they notice about color? About shape? Texture? Movement?

Check out a step-by-step guide to Makers Empire's 'Bubble Blower' 3D printing lesson plan.

6. Planet Profile

Organise students into small groups and allocate each group a different planet in our solar system.

The design challenge is to create a model of the planet that demonstrates what we know about the features, texture, materials etc. of the planet's surface.

7. Food Chain

Interactions between organisms, including the effects of human activities, can be represented by food chains and food webs.

How might this be represented in 3D?

8. Contemporary Science

Investigate a contemporary science issue such as ocean pollution or genetically modified food.

What are the issues and opinions on this topic?

What do scientists know and think?

What are some possible solutions that have been suggested by scientists?

How can your students represent these ideas in 3D?

9. Life Cycle

As a group, students create models that illustrate each stage of a life cycle for frogs, butterflies or chicken etc.

10. Changes, Changes, Everywhere...

Sudden geological changes and extreme weather events can affect Earth's surface.

Challenge students to demonstrate their understanding of this concept.

Have every student create a 3D design to represent Earth's surface and then allocate a different geological change, natural disaster or extreme weather event to each student

Students then need to make changes to their Earth surface design to show the possible effects of these changes.