

Block by Block - Building a sustainable future

Sustainability Decision Making Practical Activity - Teacher guide

Background

Year Levels: 7-12

Group Size: groups of 3 are ideal for collaboration.

Duration: 45-60 minutes

In this activity, students explore the breadth of sustainability considerations of companies, challenging the common perception that it is only about climate and recycling. They act as an energy company and analyse priorities of resources based on the company's objectives and their own beliefs of sustainability. By placing 20 blocks across a maximum of 10 of 13 topics, each block represents a share of the company's limited time, commitment and funding. The more blocks allocated to a topic, the greater the level of action and attention that issue receives. Half way through, a curve ball scenario is introduced to each group. Students analyse the way their decisions may have impact in different scenarios and then re-allocate resources. There are no "right" or "wrong" answers, but using open questioning such as "what made you decide that" and "what ifs" will bring out the most important learning from this activity.

Lab tech/teacher set up

Materials per group

- 1 [Sustainability Decision Making worksheet](#) per group (of 3). A3 size works best.
 - Print one sided so that students can refer to instructions and definitions during the activity. Alternatively, print Page 1 and upload Page 2 to your online platform.
- 20 blocks (counters/tokens) per group of 3
- 1 Curve Ball scenario per group (see Preparation section) to be supplied half way through the activity.
- Note taking book/paper
- pencils

Preparation before the lesson

- View the [Block by Block: Building a sustainable future video](#) for activity instructions
- Print the ["Curve Ball Scenarios" sheet](#)
 - Print one sided and cut into individual Curve Ball.
 - Cut into individual scenarios.
 - There are 7 scenarios per document, so print enough for one scenario per group of 3

The practical activity

Part 1: Allocating resources

Watch the Block By Block: Building a sustainable future video (~6 min)

- Watch the introduction of the video. Pause the video when cued to do the first part of the activity.
- Emphasise that there is no “right” or “wrong” allocation. The aim is to increase their awareness of sustainability pressures and their critical thinking and decision making skills

Allocate resources and make decisions (15-20 min)

- Split students into groups of 3 and provide with group materials
- Students allocate the 20 blocks given by placing them in the grid of the worksheet
 - Start at the bottom of the grid in row 1 and fill upwards
 - Each block represents a share of the company’s limited time, commitment and funding.
 - The more blocks allocated to a topic, the greater the level of action and attention that issue receives
- Distribute your 20 blocks across a maximum of 10 topics as you see fit. Prompt these few questions to justify their placements and encourage note taking to discuss.
 - Why did you prioritise that issue?
 - What risks might arise if it was ignored?
 - What topics did you choose not to prioritise?
- Once they have solidified their placements, colour the grid box where your blocks are placed.
 - Eg. if you placed 3 blocks in Water Management, colour the bottom 3 boxes

Discuss placements of resources as a class (10-15 min)

- You may like to use a show of hands for each topic as a “speed snapshot” of resource allocation.
 - Ask one student from each group to put their hand up if they allocated one block to “climate risk planning”.
 - Leave their hand up if they allocated 2 blocks.. And continue until no group has a hand up.
 - Repeat for all 13 topics
- Ask groups to talk about why they chose to not allocate any resources to the topics they did.
 - Use questions such as “what did you prioritise instead” as well as “why was this least important to your company”
 - Ensure you encourage them to speak on behalf of their decision making as a company rather than their personal ethics
 - This highlights the difference between business and personal sustainability actions.

Part 2: The curve ball

Provide the curve ball scenarios (10-15 min)

- Play the next section of the video. Pause when prompted.
- Provide each group with a curve ball. Emphasise that there is no “right” or “wrong” allocation. The aim is to increase their awareness of sustainability pressures and their critical thinking and decision making skills (no prize for least blocks moved).
- Ask students to ensure they have shaded their original allocations before moving their blocks.
- Students re-allocate their blocks and answer the prompting questions ready to discuss
 - what new situation did your group receive?
 - did you move any blocks after receiving the new information?
 - what changed and why?
 - what did this activity show you about sustainability decision-making?

Discuss new placements of resources as a class (10-15 min)

- Ask each group to talk about their curve ball and how this informed their resource allocation
- Ask how the new resource allocation was different to their original (by comparing to the shaded squares)

Play closing of the video (5 min)

- Play the close of the video
- Reflect on the pressures of decision making in sustainability
- You may like to use an “I used to think... but now I think...” activity as an exit ticket.

Keen for more?

Check out our previous years' National Science Week activities:

[How Snowy 2.0 unearthed an ancient mystery](#)

[A Snowy 2.0 3D Experience](#)