

CLUB LEADER GUIDE: SUITABLE FOR AGE 11-14

How can we live smarter?

1 Microflats

Objective

In this activity students discuss and sketch/mock up a microflat – a small, flexible living space where objects can be converted from one purpose to another.

TOPIC LINKS

🔗 Design and technology: designing a living space

ESSENTIAL SKILLS SUPPORTED

Listening, presenting, problem solving

TIME

🕒 60 minutes

RESOURCES AND PREPARATION

- squared paper (1cm squares might be easy as each square can represent 1m²)
- pencils
- pens
- cardboard or construction paper
- desktops or laptops (if available)

HEALTH AND SAFETY:

A suitable risk assessment must be carried out by the activity leader and any significant findings recorded: if carried out in schools, guidance from CLEAPSS or SSERC must be used where appropriate.

DELIVERY

- 1 Introduce the topic of the growing population of humans on Earth. Ask the students what they think might happen if the trend continues. Will we have enough food? Will we have enough space?
- 2 Ask students to research differences in living spaces in rural areas versus cities with high population density, such as Singapore, Mumbai or Manila. How big is a typical house or flat? How does that compare to the students' own city or town?
- 3 Show the class examples of multi-functional furniture. How would this make very small living space more homey and comfortable? Now set the challenge: imagine they are an interior architect at a successful company. A new client has asked them to design a microflat that will be comfortable to live in. (A microflat is typically defined as a one-room living space no more than 32 square metres.)
- 4 They should think about what kinds of things they need in their homes – what is a necessity, and what is a 'nice to have'? They should create a list of requirements that a microflat would need to have.
- 5 Once they are happy with their list of requirements, allow students to discuss amongst themselves some ideas for how they could design the space to accommodate everything on their list. You could also ask them to share with the whole class.
- 6 Explain that they will sketch and mock-up their own microflat ideas.
- 7 Guide students as they work through the student guide. Once their designs are complete, they can present them to class as if they were proposing the plans to their client. They could then revise their designs based on their classmates' feedback.

TIPS

- Give students options in terms of sizes:
 - easy - "large" 32m² home
 - difficult - 14m² home
- You could tell students that their client is very wealthy and money is no object, or you could set them a budget not to exceed.
- Clarify that each square on their squared paper is one square meter, and allow them to experiment with the overall shape of the flat before working out the furniture placement.



DIFFERENTIATION IDEAS

Support: print out and provide several example designs, including multi-functional furniture and let students discuss these with classmates if they struggle to get started by themselves.

Challenge: if students are happy with their design, let them work out their design in cardboard (the squared paper can be stuck to the cardboard to help them with the measurements, while still adding the 3D aspect).

If computers are available, let students mock up their own home on the computer using online home design websites (a free example demo – see Useful links below).

EXTENSION IDEAS

- 1 Finish the activity with a discussion about preferences and opinions.
 - can any of the students picture themselves in a micro flat in a big city like New York or Tokyo? Why, why not
 - can they picture a future where most of the population might be forced to live in micro flats
 - will the human population grow to the point where this is necessary
- 2 students could create a miniature model of their microflat

USEFUL LINKS

-  **Planner 5D: free demo of a home design tool**
<https://planner5d.com/>
-  **Makespace. A psychologist discusses why micro-apartments are popular in large cities**
<https://makespace.com/blog/posts/why-are-micro-apartments-popular/>
-  **The New Yorker: Are Micro-Apartments a Good Solution to the Affordable-Housing Crisis?**
www.newyorker.com/business/currency/are-micro-apartments-a-good-solution-to-the-affordable-housing-crisis
-  **Business Insider: 22 examples of intriguing small living spaces**
www.businessinsider.com/the-worlds-craziest-micro-apartments-you-wont-believe-people-actually-live-in-2015-10?international=true&r=US&IR=T

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Your challenge

Imagine you're in charge of designing comfortable living spaces in a very crowded city. The population is high, so there's not a lot of space available. A new client has come in to ask you to design their microflat. The space is very small, but the client wants a comfortable place to live. Everything inside needs to be considered very carefully so no space is wasted!

YOUR TASK Think carefully about how you can make use of a very small space, and design a multipurpose microflat!

WHAT YOU NEED TO DO

- 1 First, think about what your client will need in their living space. What is absolutely necessary and what is nice to have but not essential? It may be helpful to create a backstory about your client to help you decide. For example, a client who loves cooking might need more kitchen space. Make a list or ranking of what the space must include.
- 2 Find out how much space is available in the microflat.
- 3 Think of the shape of your flat. Sure, you can start with a square, but why not an L-shape? Tip: to keep it simple, stick to using square walls rather than circles.
- 4 Mind map what type of furniture you want to include in your home. Think about what you need as an absolute minimum. Beds that double as tables when folded up? A TV which can be folded upwards and hang up on the ceiling? Moveable walls that slide along the floor when they need to be moved out of the way? Make a list!
- 5 Draw the shapes of your furniture, sticking to realistic sizes. Sketch important shapes and colour them in before cutting them out.
- 6 Fill up your flat with your cuttings. Try to find the best fit for your clever furniture to make your house comfortable and original.
- 7 Once your design is complete, present it to the rest of the group who will act as your client. What is their feedback? Are there any changes you might want to make to your plan?

FUN FACTS

- 1 While they're not for everyone, microflats actually help you save money and energy (which reduces your carbon footprint, and is good for the environment!).
- 2 Perhaps the greatest advantage of having a much smaller living space is that it also significantly reduces the time you need to spend on cleaning.