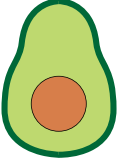
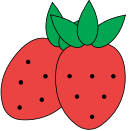
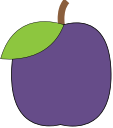
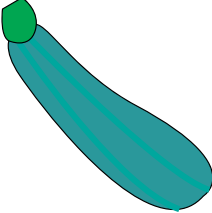
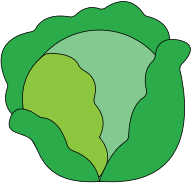
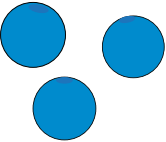
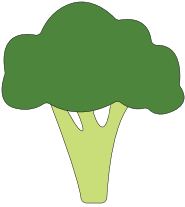

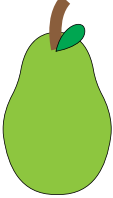
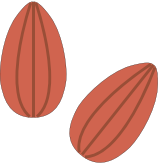


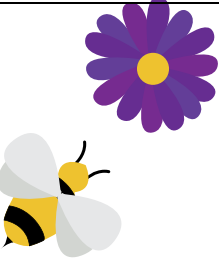



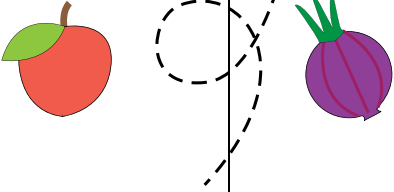

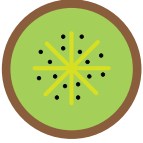
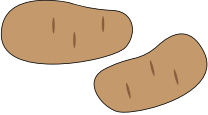

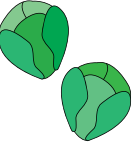
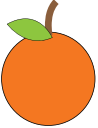
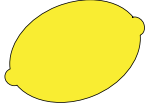


Bee Bingo

Object-Action Bingo:

Future Cities

Example:
 If your square is labelled "street" (object) and "change" (action), imagine a way that the street could be changed to be more environmentally friendly, such as "no cars allowed in the city on Fridays!" or "plant a public vegetable garden on every street!"

Street + Change	Tree + Hope	Street Drain + Dream	Bicycle + Dream	Plastic Bottle + Invent
Car + Invent	Plastic Bottle + Dream	Newspaper + Hope	Office lights at night + Change	Bicycle + Change
Newspaper + Change	Public Transport + Dream	 Free Choice!	Tree + Change	Library + Hope
Library + Invent	Street + Dream	Car + Hope	Window Box + Change	Park + Hope
Office lights at night + Hope	Park + Invent	Public Transport + Invent	Street drain + Invent	Window Box + Dream









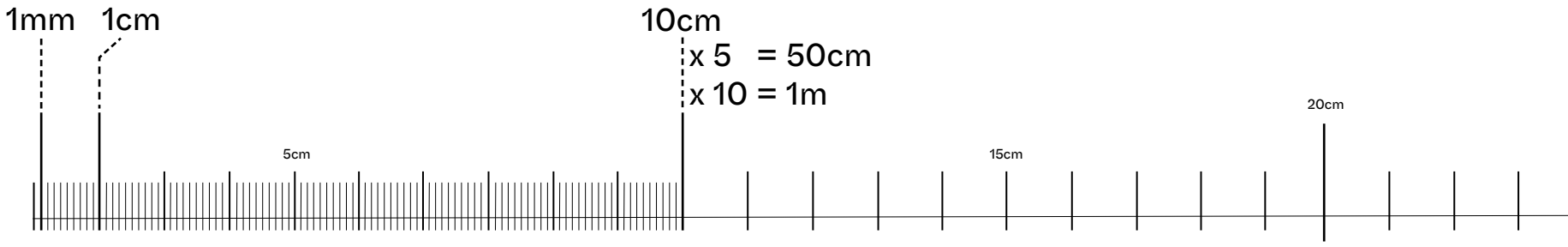
Scavenger Hunt:

Create your own

Create your own

See if you can discover other examples! Check off the boxes as you complete each challenge.

-  SIZE
-  1mm
-  1 cm
-  10 cm
-  50 cm
-  1 m









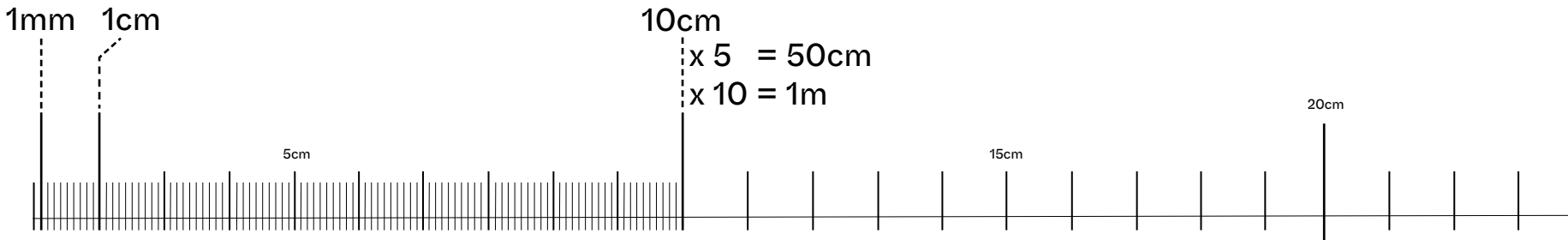
Scavenger Hunt:

Recycle:

It's estimated that in 2018, each person in the EU generated an average of 492 kg of trash. When we recycle materials, we prevent them going into landfills, which negatively impacts our ecosystem. Recycling also reduces the need to make new products, which saves energy and reduces the emission of carbon dioxide (CO2) and other greenhouse gases produced during the manufacturing process.

Below are some objects that are made of recycled materials. See if you can discover other examples! Check off the boxes as you complete each challenge.

SIZE	EXAMPLE OBJECTS
 1mm	Coffee grounds: have numerous uses, including being used as a bio-fuel or being used to grow mushrooms.
 1 cm	Toothbrush (width): can be made of recycled plastics or wood. If it's put into landfill, the average plastic toothbrush will take 500 years to decompose.
 10 cm	Running Shoe / Trainer: some companies are rescuing used plastic bottles before they enter the ocean and making them into fibers for trainers (5 plastic bottles for each pair of shoes). Other companies are turning used plastic bottles into canvas material for boots.
 50 cm	Backpack: can be made of recycled plastics, using up 10 plastic bottles. T-shirts: can be made of recycled plastics, using up 10 plastic bottles per shirt.
 1 m	Sleeping Bag: made of recycled plastics can use up 50 plastic bottles! Tights / Hosiery: a few manufacturers have found a way to use old fishing nets into tights. Old, disused fishing nets are one of the worst pollutants in the ocean and contribute to 50% of the human trash in ocean waters.
 >1 m	Playground equipment: some playground equipment is made of recycled plastics Car Parts like seat cushions, dashboards, splashboards: plastics make up 50% of modern cars. Some car companies are attempting to recycle plastics from their old cars, and to use recycled plastics in their new cars.

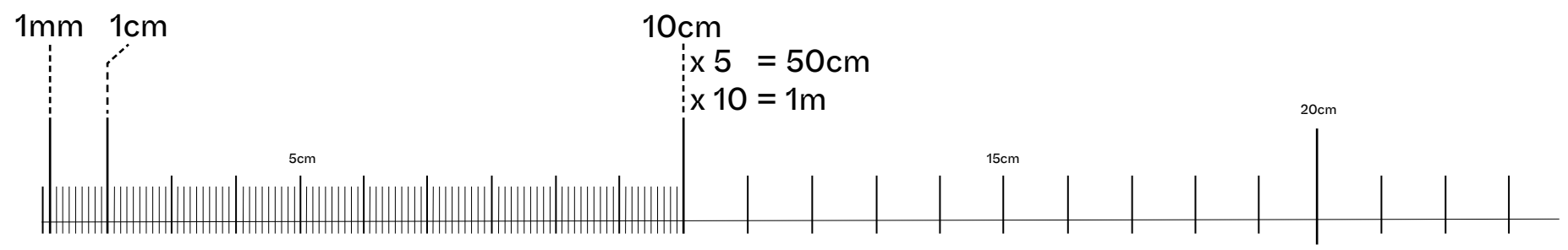


Scavenger Hunt:

City Ecosystems:

We've listed below some objects that can support healthy ecosystems in cities. See if you can discover other examples! Check off the boxes as you complete each challenge.

SIZE	EXAMPLE OBJECTS
<input type="checkbox"/>	1mm Seeds: planting flowers in a window box or in your garden to help butterflies & bees.
<input type="checkbox"/>	1 cm Ladybird beetles: these eat insects such as aphids that kill many plants. You can buy and release ladybirds into your garden.
<input type="checkbox"/>	10 cm Dried grass or cotton or hemp string: put out soft materials in spring time for birds to use in nest-building. Outside Plant Pots: plant flowers that help feed butterflies and bees in the city. Bird Food: winter is a particularly hard time for birds to find food. Hang up mesh bags or other containers filled with suet/ fat.
<input type="checkbox"/>	50 cm Bird box / house: help provide safe shelter for nesting birds to rear their offspring. Bird Bath: urban birds need water to bathe and clean the pollutants that get trapped in their feathers and make it hard to fly. They also need a source of clean fresh water!
<input type="checkbox"/>	1 m Compost bin: to recycle food waste, capture carbon and create compost to use in your garden. Bicycle: when humans use bicycles instead of driving cars, they do not pollute the air, making sure it is clean and breathable by humans, birds, bees, and every other animal.
<input type="checkbox"/>	And of course, removing plastic trash in any of these sizes also helps boost healthy life in cities!










Scavenger Hunt:

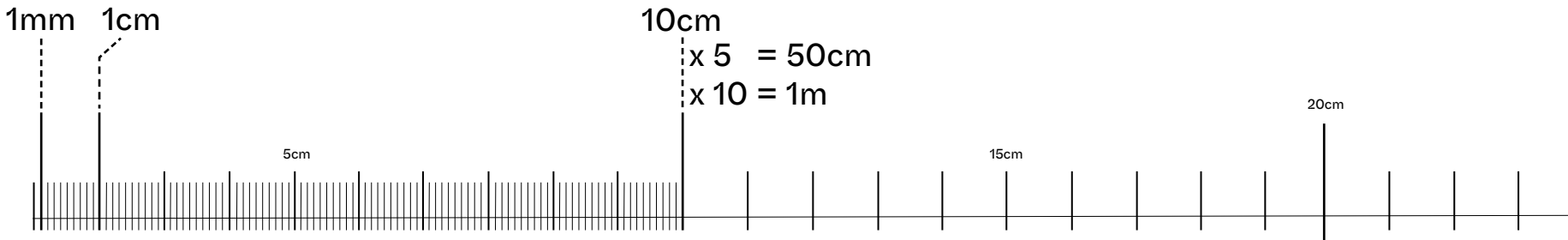
Ocean Ecosystems:

It is estimated that 80% of ocean debris is composed of plastic: 8 million tonnes of plastic enter the ocean each year. If we continue at this rate, then by the year 2050, it is estimated that there will be more plastic in the ocean than fish.

























We've listed below some objects that end up in the oceans, creating pollution. See if you can discover other examples! Check off the boxes as you complete each challenge.

- | SIZE | EXAMPLE OBJECTS |
|---|---|
|  | <1 mm Microbeads: used in some shampoos, toothpastes, and face & body scrubs. |
|  | 1 mm Dental Floss: when this ends up in landfill, seabirds can swallow the strands of floss and die, or cough up the floss and transfer it into the oceans, rivers, and other bodies of water. Although most dental floss is currently made of nylon, which does not decompose some companies have created biodegradable floss, made from materials such as bamboo fiber. |
|  | 5 mm Cigarettes: the ends are often washed into street drains, carrying the pieces and their toxic chemicals into the ocean.
Drinking Straws |
|  | 1 cm Plastic Knives, Forks, and Spoons (width): some countries (such as India) have increasingly using edible cutlery (made of wheat and rice flour) as an alternative to using plastic cutlery. |
|  | 10 cm Plastic food container |
|  | 50 cm Plastic bag: in the ocean look like jelly fish to many whales, dolphins and turtles, who can die after eating a plastic bag by mistake. |
|  | 1 m Roofing Materials: 2% of landfill is from roofing materials. Sometimes, this can end up in the ocean. Scientists have invented a way that these materials can potentially be broken down and digested by fungi, rather than being put into landfill. |

NOTE: Many liquids can also pollute the oceans, such as oil, chemicals from industrial processes, sewage waste water.



Oak Trees
+
Chimneys

49	 48	47	46	 45	 44	43	42	 41	40
39	 38	 37	 36	35	34	33	 32	31	 30
 29	28	27	 26	25	 24	 23	22	21	 20
19	18	 17	16	 15	14	13	 12	11	10
 9	 8	7	 6	 5	4	3	 2	 1	 0

Oak Trees + Chimneys

Points table for reducing Emissions (tonnes CO₂): choose, create, or research an example with the impact that corresponds with the number on your die roll.
Examples are approximations:

Decrease

- 1 Switching 20 light-bulbs for 2 families from incandescent to LED
- 2 Recycling 100 trash bags of waste instead of putting in landfill
- 3 The planet's oceans, soil, and plants naturally capture 21 gigatons of CO₂ each year
- 4 100 people cycling for 5 km each day for 1 month (instead of using cars)
- 5 If 5 families (of 4 people) switched from using hot water for their laundry and using a dryer, and instead washed their clothes in cold water and air dried them, for 1 year
- 6 10 medium-growth trees growing in a city for 10 years

Increase

- +1 40 families, each burning one 18 pound cylinder of propane gas (e.g. for a BBQ)
- +2 10 families each sending 10 bags of waste to landfill and not recycling
- +3 5 people use a running tap when washing dishes, instead of using a bowl or sink filled with water, the energy used to warm this water during 1 year
- +4 100 cars each driving 100 miles
- +5 2 short round trip flights for a family of 5 people
- +6 If the petrol in 0.08 of a tanker truck is used

Research to find other actions that increase or decrease CO₂ emissions. Check out <https://footprintcalculator.henkel.com> to find values that correspond to your own footprint.