10 · Project sheet · Be a Sorting Robot

Robot / Maker Lab practical · Nursery 1 · Term 2 · Week 6

1. At a glance

Time	40 minutes (fits the lesson; 15 min if used on its own)
Group size	Groups of 4–6; groups guess each other's rule
Learning goal	I can sort things by one rule and say my rule.
Coding idea	A rule decides the groups. Change the rule and the same things make new groups.
Week link	https://rhinoxscientifica.com/q/n1-t2-w6

2. Materials needed

Item	Per	Low-cost swap
2–3 hoops	group	Chalk circles or skipping ropes
Basket of big objects (nothing smaller than a toilet-roll opening)	group	Picture cards
Sorting picture cards	group	Draw them
Red, blue, yellow cards	child	Coloured paper
Junk boxes + bin labels (optional)	class	Skip
Step Star stickers	child	Washable marker star on the hand

3. Safety and care

- Nothing smaller than a toilet-roll tube opening.
- Walk to the hoops.
- Hoops lie flat so no one trips.
- Carry one object at a time.

4. Before the lesson

1. Fill the baskets; check every object is big enough.
2. Print the sorting cards and colour cards (Printables).
3. Read the lesson spec the evening before and lay out the cards.

5. Step-by-step guide

Step	Teacher says	Children do
1	"Ayo's basket is mixed up! Let's be sorting robots."	Look at the basket
2	"Choose a rule. Colour? Shape?"	Group chooses a rule secretly
3	"Sort everything into the hoops by your rule."	Carry objects to hoops
4	"Next group: guess the rule!"	Another group guesses

Step	Teacher says	Children do
5	“Were they right? Say your rule.”	“Our rule was colour!”
6	“Now sort the same things by a different rule.”	Sort again

6. Explore it

Question	Can the same things be sorted in different ways?
Predict	“If we sort by shape instead of colour, will the groups change?”
Try	Sort by colour, then sort the same things by shape.
Observe	“Which things moved to a new group?”
Explain	The rule decides the groups. A new rule makes new groups.

7. Talk about it

1a. What was your rule?

1b. Which group has the most?

1c. Did the other group guess your rule?

2a. What is the same about these things?

2b. What is different?

2c. Can you sort them another way?

8. Support and stretch

Support	Two groups by colour; the teacher puts the first item in each hoop.
Stretch (optional)	Sort by two features (colour and shape). Never assessed.

9. How we check

Observation only, not marked.

Look for	Secure	With prompts	Not yet
Sorts objects by one feature	☐	☐	☐
Says the rule	☐	☐	☐
Guesses another group’s rule	☐	☐	☐

10. Take-home and parent note

> **Dear parent or carer**
> Today we were **sorting robots**: we put things into groups by one rule.
> At home: sort the washing or the shopping and ask “What is our rule?”

11. Show and share

- Each group shows its sorted hoops; the class guesses the rule.

- Everyone says: “Sorting is smart!”
- Every child who sorted by a rule and said it gets a **Step Star sticker**.



The Step Star is a weekly sticker, not a badge. The term badge “Step Thinker · Term 2” is awarded in Week 13.