

# LESSON PLAN

## Science and Technology (STEM)

### Early Learning goals

- Children share information about their family (EYLF Learning outcome 1.3)
- Children use digital technologies to access images (EYLF Learning outcome 5.5)
- Children develop simple skills to operate digital devices, such as turning on and taking a photo with a tablet (EYLF 5.5)

### Activity

Sort out a number of different animals that individual children have as pets at home. This can be done at a computer on a simple program for sorting animals. Children can use the Internet to access images of animals. Support all children to access science and technology experiences safely. With the support of parents they can take a digital photo of their pet/s and use it in the activity too.

### Extension

Assist the children in locating information about the animals on the Internet and record the findings.

### ICT Resources

- Computer/table computer
- Word processor
- digital images of animals.
- IWB/data projector
- Internet

### ICT Levels of Differentiation

- To be able to complete the program with support
- To ask for specific software title
- To be able to complete program without support
- To take photographs (digital cameras)
- To know it is where to find information (Internet)

### Ideas for adapting to my context

## Lesson Procedure: How will it develop?

Introduction:

Main Activity:

Group work:

Independent practice:



**Critical Reflection** ([Academy resource](#)).



**Observation and Assessment** ([Academy resource](#)).



## Instructions

1. Discuss and list with the children as a whole class discussion the pets that they have at home.
2. Ask the children the day before if they take a photo of their pet/s with the support of the parents.
3. Send in the photos or begin to locate them on the Internet.
4. As a whole class, discuss what each pet is called .e.g dog, cat, etc
5. Demonstrate how to sort the animals using an interactive whiteboard, projector and a word processor.
6. Demonstrate how to create a table in the word processor and ask for feedback.
7. Place the children into groups to work out the sorting of animals together.

Higher Order Thinking Skills	Computer Skills	KLAs
Deciding the number of rows and columns	Create a table	Technology
Evaluate their use of program	Open a program	Science
What keyword to use to search on Internet	Take a digital photo	
Reflect on ICT learning	Upload photo to computer	
Explain and justify why the program is suitable for sorting	Search for images on Internet	
Deciding on the size of the columns & rows	Inserting images on a file	
	Editing text	








## Connecting this to Your Professional Growth

Whether you discovered this lesson through the **Preschool Technology Activities** library or the **Science and Technology in Early Childhood Education** workshop, it marks only the beginning of your professional learning journey with this activity.


If you downloaded this as a standalone lesson plan from the **Preschool Technology Activities** page:

This pathway is perfect for starting practical implementation, but to grow professionally, continue your learning by:

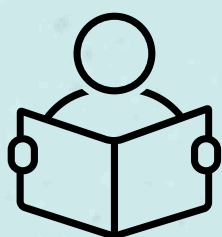
- Accessing the **Science and Technology in ECE Workshop**:
- Learn the research-based strategies and developmentally appropriate practices behind digital exploration in nature-based learning. Completing this 3-hour PD also means you can:
  - Log professional learning hours in your workbook's Workshop Reflection pages
  - Identify how the lesson connects with EYLF 4.1, 4.2, 2.4, 5.5 and APST 2.6.2, 3.3.2, 3.4.2
  - Strengthen your TPACK understanding by examining how technology supports pedagogy and content in science exploration
-  Using the **Wisdom Tool**:
  - Search terms like “outdoor learning with technology” or “digital photography in ECE” to find supporting ideas
  - Find links to case studies and alternative lesson structures from other members
-  Engaging in the **Community Forum**:
  - Post a question such as “How have others extended this lesson to integrate STEM?”
  - Share a child's digital collage or photo story and ask for feedback
-  Exploring the **Members' Library**:
  - Watch the Dr Amanda Sullivan presentation on STEM and gender equity in ECE—essential for any science or technology-based learning
  - Browse multimedia integration tips to help children use photos as part of storytelling, documentation, or assessment

If you accessed this lesson from the **Science and Technology in Early Childhood Education Workshop**:

You've already taken a more strategic step by exploring the educational foundations behind the activity. Now make sure to document and deepen your growth:

-  Have you completed the workshop in full?
  - Log your 3 hours of PD using the **Workshop & Resources Reflection** page in your workbook
  - Record how you applied workshop strategies to your planning and reflect on the outcomes

- ✈ Have you tracked your TPACK growth?
  - Use the TPACK radar chart in the workbook to rate your confidence in Technological, Pedagogical, and Content Knowledge
  - Reflect on how this lesson plan developed your use of technology as a scientific and creative tool
- 🔍 Have you explored the Members' Library and Wisdom Tool further?
  - Search for related topics such as "collage apps for early learners" or "how to assess children's scientific thinking through photos"
  - Look at additional STEM-related lesson plans or video examples to expand this activity into a series
- ... Have you shared or connected with other educators?
  - Post your reflections or adaptations in the Community Forum to gain feedback
  - Comment on others' posts to broaden your understanding of diverse contexts and adaptations



Have you checked for any related Case Studies in the "Examples of Technology Integration in the Classroom" playlist in the Members' Library?



**No matter which path you started on—Standalone Lesson or Workshop-Based—you'll get the most out of this lesson when you connect it to your membership learning journey using the workbook tools:**

- ✓ Log your activity
- ✓ Track your growth
- ✓ Seek feedback
- ✓ Reflect regularly



# Workbook Guidance

This Sorting Animals lesson provides a rich, hands-on opportunity for children to explore classification, digital photography, and using software to organise information. It supports early science and ICT capability while helping you apply key components of your Membership Workbook.

## 1. TPACK Growth – Using ICT to Support Science and Classification

Workbook Section: TPACK Radar Chart – Self-Assessment Tool (Pages 8–9)

APST Links:

- 2.6.2 – Use effective ICT strategies to make content meaningful
- 3.4.2 – Select and use ICT resources to engage students

Why this fits:

This lesson strengthens your Technological Knowledge (TK) and Technological Pedagogical Knowledge (TPK) by guiding children to use digital images, sort animals, and communicate scientific ideas using a word processor and projector.

 Action Step:

Reflect in your TPACK Radar Chart:

- How did digital tools help children organise and communicate their scientific knowledge?
- What was your confidence level before and after using these tools to support learning?

## 2. Success Path – Adaption Stage: Purposeful ICT Integration


Workbook Section: Differentiation in ICT Learning – Early Years Planning Tool (Page 16)

APST Link:

- 4.1.2 – Differentiate teaching strategies for diverse learning needs

Why this fits:

Children participated at different levels—some used cameras with parent support, others searched online or inserted images into tables. This showcases purposeful differentiation and scaffolding of ICT use.

 Action Step:

Complete the Differentiation Table:

- What scaffolds did you use for children with emerging skills?
- Who was able to complete the task independently?
- How did your approach ensure all learners were supported?

### 3. Safe & Ethical ICT Use – Infusion Stage


Workbook Section: Ethical Use of ICT in Early Childhood – Reflection Tool (Page 18)

APST Link:

- 4.5.2 – Promote safe, responsible ICT use in learning

Why this fits:

This lesson provides an authentic context to reinforce safe internet searching and responsible photo sharing (e.g., children bringing in images of their pets or searching for animal photos online).

 Action Step:

Use the Ethical ICT Use Reflection Page:

- What discussions did you lead about using digital images ethically?
- What classroom rules or expectations did you establish around device use and digital content?

### 4. Assessment & Observations in ICT Activities

Workbook Section: Observation & Assessment Using ICT – Planning Template (Pages 20–21)

APST Link:

- 6.2.2 – Use assessment strategies to improve teaching

Why this fits:

You can assess children's ICT capabilities (e.g., creating a table, inserting images), science knowledge (animal types and characteristics), and communication skills (explaining choices during group work).

 Action Step:

Use the planning template to document:

- Digital competencies (e.g., using software tools)
- Science understanding (e.g., animal sorting categories)
- Verbal explanations or collaboration observed during the activity

### 5. Professional Learning & Community Engagement

Workbook Section: Workshop & Resource Integration Log (Page 23)

APST Links:

- 6.2.2 – Engage in professional learning
- 7.4.2 – Participate in professional networks to improve practice

Why this fits:

This lesson reflects strategies from the Science and Technology in Early Childhood Education workshop, such as using digital devices to support classification, observation, and expression in scientific inquiry.

### Action Step:

- Complete the Workshop Reflection Page if you accessed this lesson through the workshop
- Revisit the module on using digital media in early science activities
- Watch Dr Amanda Sullivan’s presentation in the Members’ Library for insight into digital STEM engagement

### Reflection Prompts:

- How did this lesson reinforce workshop concepts around science, inquiry, and classification?
- What new strategies or insights did you gain through the Wisdom Tool or the Community Forum?

## 6. Using the Wisdom Tool and Community Forum

### Workbook Sections:

- Wisdom Tool Reflection Log (Page 14)
- Community Forum Engagement Notes (Page 15)

### Action Step:

- Use the Wisdom Tool to search for ideas such as “animal classification digital activities” or “data visualisation in early years”
- Record your findings and any new approaches
- Share your results, group-created animal tables, or reflections in the Community Forum

### Final Reminder:

Log this lesson under the Adaption Stage of your Success Path. If children completed the task independently or extended their skills (e.g., comparing animals, researching online), reflect on how this may indicate progression toward Infusion.

This lesson is not just about sorting—it’s a significant step in your professional growth journey using the tools, reflection strategies, and community resources available to you through the ICT in Education Teacher Academy.