












Integrated ICT Learning Unit

Volume 5 - 7

Aircraft

<p>Aircraft Ted Jones</p>	<h3>Types of Aircraft</h3> <table border="1"><tr><td><p>Single-engine</p></td><td><p>Twin-engine</p></td><td><p>Sportplane</p></td></tr><tr><td><p>Cargo plane</p></td><td><p>Turboprop</p></td><td><p>Business jet</p></td></tr></table>	 <p>Single-engine</p>	 <p>Twin-engine</p>	 <p>Sportplane</p>	 <p>Cargo plane</p>	 <p>Turboprop</p>	 <p>Business jet</p>
 <p>Single-engine</p>	 <p>Twin-engine</p>	 <p>Sportplane</p>					
 <p>Cargo plane</p>	 <p>Turboprop</p>	 <p>Business jet</p>					
<p>Propulsion</p> <ul style="list-style-type: none">• Unpowered aircraft – gliders, hang gliders, sailplanes and paragliders• Powered aircraft – piston engines, turbines, fuel tanks and gas turbines• Propeller aircraft• Jet aircraft• Rotocraft• Rocket-powered aircraft	<h3>Uses for aircraft</h3> <ul style="list-style-type: none">• Military• Civil• Experimental• Model 						



Overview

This integrated ICT learning unit consists of one activity which explores the concept of **aircrafts**.

Lesson format:

- 10 minutes Educational game (optional; at the discretion of the teacher)
- 5 minutes "Tech Talk" which introduces ICT terminology
- 5 minutes Touch Typing skills which develops essential touch typing techniques
- 20 minutes+ Integrated activity involving tasks which relate to relevant content being covered in the classroom

ICT skills covered in this Learning Unit:

Word Processing	Graphics	Spreadsheets	Databases	Internet	E-mail	Presentations	Drawing	Web design	Information Organiser	Simulations & design	Desktop Publishing	Operating Systems	Programming & logic
	√			√		√						√	

Structure of the Learning Unit:

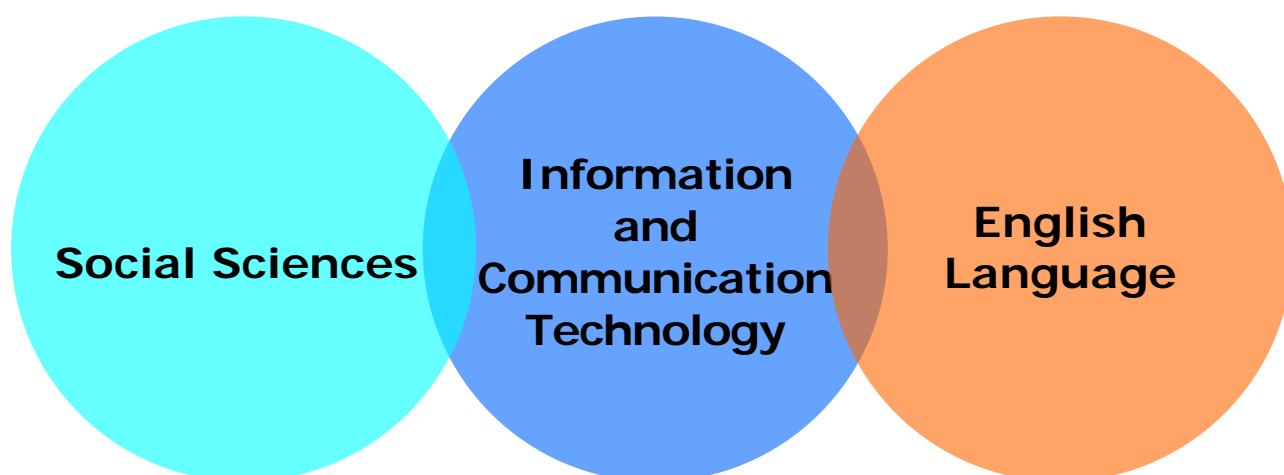
Integrated Activity

This lesson is aimed at integrating ICT into current, relevant class curriculum. Using this approach enables learners to use the computer not only as a working tool but also as a relevant learning tool to learn new concepts and skills or consolidate previously learnt work. This activity will take between 20 – 60 minutes (or 1-3 lessons) to complete depending on the ability of the learners and the time available.

e-Learner Assessment

The required assessment for each unit is completed by the ICT teacher by means of evaluating each skill on the skills matrix. The ICT teacher can indicate on the skills matrix whether the skill is being practised or developed by inserting a tick in the appropriate column next to the appropriate skills. Should the teacher wish to formally assess the skills, the relevant achievement level can be indicated in the assess column next to each skill assessed. The corresponding e-Learner skills should also be marked off when completed. The e-Learner skills can also be formally assessed by subscribing to the relevant online e-Learner assessment for which an ECDL endorsed certificate will be issued upon successful completion of the course. By utilising these assessment tools, the level of ICT competency as well as the progress of each learner can be monitored. The assessment matrix, as contained in this lesson instruction book, may be printed or photocopied for each learner.

ICT INTEGRATION ACROSS THE CURRICULUM



STRUCTURE OF LESSON AIRCRAFT

INTEGRATED LESSON	
Prior Learning Requirements	
Concept / Topic: Knowledge of aircrafts	
ICT Skills: Using basic tools of a presentation programme	
Educational Game	10 Min
A suitable educational game may be used as an optional activity at any point during the course of the lesson at the discretion of the ICT or class teacher	
Touch Typing	5 Min
A suitable activity should be selected by the ICT or class teacher to ensure continuity and progression of appropriate skills	
Tech Talk	5 Min
TERAFLOP A measure of a computer's speed. It can be expressed as a trillion floating-point operations per second.	
Integrated Activity	20 Min
Learners create a PowerPoint presentation about the types of aircrafts found, what they are used for and different propulsion methods.	
Resources Used	
Software: Microsoft PowerPoint	
Prerequisite: None	
Template: Aircraft.pptx	
WWW: Various	
Subjects	
<ul style="list-style-type: none"> • Social Sciences • English Language 	
Additional Learning Opportunities	
Concept / Topic: 2.9 Transport	
ICT Skills: 4.4 Our Changing World - Transport	
Beyond the ICT Centre	
<ul style="list-style-type: none"> • Visit your local airport. • Create a poster of your favourite aircraft. 	

Learner name:	Class	
Integrated Activity: Learners create a PowerPoint presentation about the types of aircrafts found, what they are used for and different propulsion methods.		
Theme/Topic: Aircraft	Integrated Activity	
e-Learner Skills	Practice	Assess
Unit 2 - Files and Folders		
2.2.1 Right / Left click mouse		
2.2.2 Single / Double click mouse		
2.3.1 Alpha / numeric keys on keyboard		
2.3.2 Special Keys (Ctrl / Alt / Shift etc) on keyboard		
2.4 Recognising icons		
2.5.1 Open / Exit programmes Using Shortcuts		
2.5.2 Open / Exit programmes Using Start Menu		
2.6.1 Maximise / Minimise window		
2.6.2 Close window		
2.6.3 Move window		
2.6.4 Multitask between documents / applications		
2.6.5 Using the task bar		
2.7.1 Navigating through folders / Folder structure		
2.7.3 Navigating within a file (scrollbar / hyperlinks)		
2.7.4 Opening Files		
2.7.5 Saving Files		
2.7.6 Closing Files		
7 = Outstanding Achievement 6 = Meritorious Achievement 5 = Substantial Achievement 4 = Adequate Achievement 3 = Moderate Achievement 2 = Elementary Achievement 1 = Not Achieved		

Learner name:	Class	
Integrated Activity: Learners create a PowerPoint presentation about the types of aircrafts found, what they are used for and different propulsion methods.		
Theme/Topic: Aircraft	Integrated Activity	
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Unit 6 - Presentations		
6.1 Open programme		
6.2.1 Start new presentation		
6.2.3 View slide show		
6.3.1 Insert new slide		
6.3.2 Slide Layout designs / Backgrounds		
6.3.3 Delete Slides		
6.4.1 Insert graphics		
6.4.2 Move graphics		
6.4.3 Resize graphics		
6.4.4 Copy / Paste graphics		
6.4.5 Delete graphics		
6.5.4 Resize text boxes		
6.5.7 Format Text (font face/ colour / size / bold)		
6.5.8 Align text		
6.7 Save		
6.10 Exit		
<p style="text-align: center;"> 7 = Outstanding Achievement 6 = Meritorious Achievement 5 = Substantial Achievement 4 = Adequate Achievement 3 = Moderate Achievement 2 = Elementary Achievement 1 = Not Achieved </p>		

Learner name:	Class	
Integrated Activity: Learners create a PowerPoint presentation about the types of aircrafts found, what they are used for and different propulsion methods.		
Theme/Topic: Aircraft	Integrated Activity	
e-Learner Skills	Practice	Assess
Unit 7 - Web Browsing and Email		
7.1 Open web browser		
7.2 Entering URL		
7.3.1 Access Online web page		
7.3.2 Access Saved web page		
7.4 Search engines		
7.5.1 Using Hyperlinks		
7.5.2 Using Scrollbars		
7.5.3 Using Forward / Back button		
7.7 Copy / Paste Information		
7.8.1 Save Images		
7.11 Exit Web Browser		
<p style="text-align: center;"> 7 = Outstanding Achievement 6 = Meritorious Achievement 5 = Substantial Achievement 4 = Adequate Achievement 3 = Moderate Achievement 2 = Elementary Achievement 1 = Not Achieved </p>		



INTEGRATED ACTIVITY

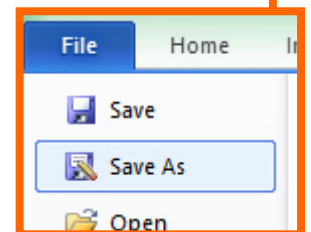
In order to promote relevant discussion, the following questions are posed by the educator to the learners:

- **Can you name the different aircrafts found?**
- **Who knows the different propulsion methods?**
- **Have you ever been on an aeroplane?**

A short discussion takes place about aircrafts. An aircraft is a machine that is able to fly by gaining support from the air.

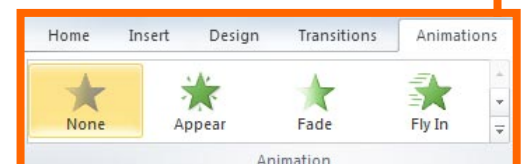
Task: Learners create a PowerPoint presentation about the types of aircrafts found, what they are used for and different propulsion methods.

1. Open the template → double click on the template found in the folder you just downloaded.
2. Save your document into your digital portfolio → **File** → **Save As** → locate your portfolio → double click → type a suitable name in the file name box → **Save**.
3. Create a PowerPoint slide show (including your Title slide).
To insert a new slide → **Home Ribbon** → **New Slide**.
4. Click on the **first slide** → click inside the textbox "Click to add title" → type the title "Aircraft".
5. Click inside the textbox "Click to add subtitle" → type your name.
7. Add colour to text and change the font → **highlight the text** → **Home Ribbon** → make necessary changes to style, **Colour and Size**
8. Now you are going to look for suitable information on aircrafts.
Minimise PowerPoint by clicking on the **"-"** **minus sign** at the top right hand corner of your screen.

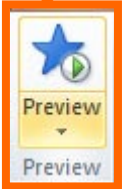


9. Access the internet: <http://en.wikipedia.org/wiki/Aircraft>.
10. Record information on a piece of paper → do this using your own words. (Make sure to find information for the headings: "Types of Aircraft", "Propulsion" and "Uses for Aircrafts").
11. If you wish to save pictures from the internet → **right click on the image** → **Save Image as** → **locate your portfolio folder** → **Save**.
12. Minimise the internet → **maximise PowerPoint** by clicking on the tab on the **taskbar** at the bottom of the screen.
13. Select the **Slide 2** → use this slide to list the types of aircrafts found (*Note: You may use an image for this*).
14. Click on the box "Click to add title" and type a suitable title for this slide eg: "Types of Aircraft"
15. To insert a suitable **Picture** to this slide, click on the **Picture Icon** on the slide → **locate the folder you downloaded** → **select the suitable image** → **Insert**.
16. Click on **Slide 3** → add your information about the **methods of propulsion**, by clicking on "Click to add text" box. (*Note press "enter" on your keyboard to start a new point – it will automatically insert a new bullet point*).
17. Add a suitable title eg: "Propulsion".
18. Click on **Slide 4** → add your information about the **uses for aircraft**, by clicking on "Click to add text" box.
19. Insert a suitable title eg: "Uses for Aircraft".
20. Insert a suitable **Picture** to this slide, click on the **Picture Icon** on the slide → **locate the folder** → **select the suitable image** → **Insert**.
21. Save your presentation → **File Ribbon** and **Save**.
22. Animate your slide show by clicking on **Animation Ribbon** → Select required effects in the **Animation tab** (*Note: you need to click on an object to enable the animations tab*).

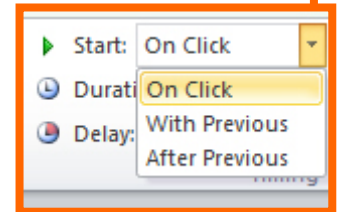
Click to add text



23. **Click on the down arrow in the add effect box → select entrance → select an effect → click on Preview in the Animations Ribbon** to preview your animations

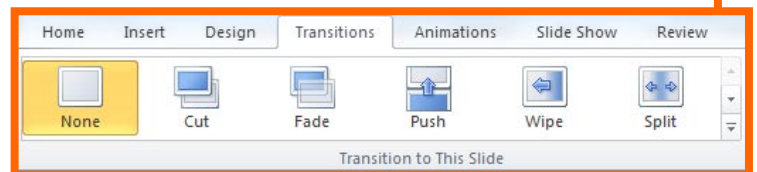


24. Now we will change how the object enters the slide show. Make sure the correct object is selected → Click on **Start - "On Click"** dropdown → **select either on click, with previous or after previous**



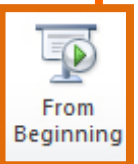
25. This option allows the object to either only appear when you click, after the object before it, or with the object before it

26. Apply slide transition to your show → **Transitions Ribbon** → **click on a suitable transition**



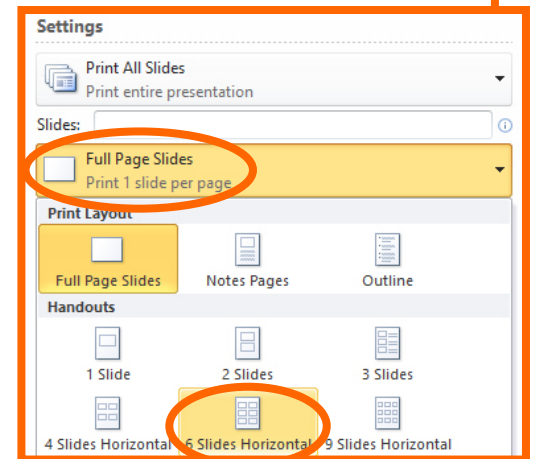
27. Do the same to each slide until you have animated every slide in the presentation

28. To view your show → **Slide Show Ribbon** → **From Beginning.**

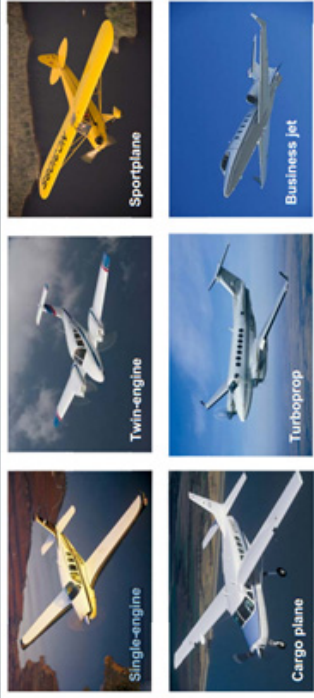


29. Print **your presentation** – 6 slides per page → **Office Button** → **Print** → under **Full Page Slides**, select **6 Slides Horizontal** from dropdown menu → **Print.**

30. **Close Microsoft PowerPoint** by clicking on **File** → **Exit** or clicking on the **"X"** in the top right hand corner of the screen.



Types of Aircraft



Uses for aircraft

- Military
- Civil
- Experimental
- Model



Aircraft
Ted Jones

Propulsion

- Unpowered aircraft – gliders, hang gliders, sailplanes and paragliders
- Powered aircraft – piston engines, turbines, fuel tanks and gas turbines
- Propeller aircraft
- Jet aircraft
- Rotocraft
- Rocket-powered aircraft

