

DEVICES - PLANNING FOR EFFICIENCY, MANAGING PROBLEMS

SCENARIO 4



Original materials created on behalf of the Education and Training Foundation and funded by the Department for education

-
- 01 CONTENTS
 - 02 INTRODUCTION
 - 03 USING DEVICES
 - 04 MANAGING PROBLEMS
 - 05 SUMMARY
 - 06 EXTENSION
 - 07 FURTHER RESOURCES
 - 08 APPENDICES

Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Refers to Essential Skills Modules:

Using Devices

Identifying and Solving Technical Problems

Relates to Standards:

Structured approaches to solving problems with technology

Solving technical problems





Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

This module starts with accepting two central points about technology.

Devices are designed to benefit the user.

The ultimate value of using technology is having more time available for other things. To achieve this, users need to know what they want from their use of technology and what to do when it fails to perform.

In this scenario, we will explore these two concepts:

1. Getting value from our devices
2. Having the confidence to fix failures and then knowing how and where to find help.



TEACHING TIP

This module combines standards from two areas relating to Using Devices and Identifying and Solving Technical Problems.

It looks at how devices should work and how to manage problems when they don't work.

The module should help raise confidence in learners to:

1. Question and address whether they are getting all they can from their technology
2. Know what steps to take to address situations when this isn't happening.

Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Using Devices

How we use technology in all aspects of our lives is complex.

Cost, life choices and styles often dictate our needs. It is matched by an equally complex picture of types of devices that are available, most of which can be made to share data.

This includes having access to other devices that are not personally owned. For example, the ones used by employers or colleges.

It means that what devices each person owns is down to a set of personal circumstances.





Scenario 4

The best technology

The approach in getting the right pattern of use starts not with ‘what can I do with the technology I have access to’, but ‘how do I want technology to fit and support my wider life choices’.

Another way of putting this is that users should manage their technology rather than their devices manages them.

Example:

In winter, we all want to be warm which is why we turn on the central heating. We don’t want to have central heating for its own sake, but it is the means to an end. I don’t invite friends to my house to admire my boiler, but I am pleased that they are warm whilst there.

The best test in having efficiency and avoiding failure is that in everything users do where technology is involved, **the technology is not noticed or not commented on.**

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Learning activity:

Ask learners to consider this quotation:

“When you go to the hardware store to buy a drill, you don’t actually want a drill, you want a hole, they don’t sell holes at the hardware store, but they do sell drills, which are the technology used to make holes. We must not lose sight that technology for the most part is a tool.”

(Fletcher, 1996)



TEACHING TIP

The purpose of the discussion is to help learners understand a place and purpose as a tool that works best when it seems invisible to us.



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

How to get it right

Understanding the components:

Whilst learners may have devices, what users actually have is a collection of the components they have on them.

They are:

1. **Hardware** - The physical devices
2. **Firmware** - The components inside the hardware
3. **Software** - The applications that run on the firmware inside the hardware



TEACHING TIP

Ask learners to identify examples of all three component parts that they use or are aware of.

An awareness of the component parts of technology available to them personally and access elsewhere (work, college, library) is a good starting point for thinking through how technology is used.



Scenario 4

Learning activity:

Thinking through what we want from technology

Use the [Activities and technology sheet](#). It is a table of variables to ask learners to consider privately what devices they have, what they want technology to do for them and how close they are to having a match between the two. (Entry level)

Considering each learner's employment or plan for employment, do they have sufficient access through their devices to all they need for their job, or to prepare for and present themselves for employment. (Level 1)

Later in this scenario you can use this exercise again in more detailed form to help learners make a plan.

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Considering the physical properties of components and devices

There are four variables that need answering that constitutes the management of personal relationship with digital technology.

1. What do you want to do?
2. What applications can accommodate this?
3. What is important to have?
4. What devices might you need?



TEACHING TIP

Lead a discussion around the physical capacity of components and devices.

Use the [Physical components list](#) to support a discussion about the types of physical properties of technology users might want to consider for particular tasks.

There is no correct answer and learner may well end up circling areas that are important to them.

Scenario 4

Managing problems

Recognising problems

Technology generally fails to perform in one of three ways.

1. It does not work
2. It runs slowly
3. It takes too much effort and 'know-how' to make it do what is required

It is important to know when any of these issues arise and why it might be so. There are always solutions, and they will range from the simple and obvious through to more complex ones.

Users are not expected to be able to solve all problems, but it is good to be able to resolve the simple problems and to be able to identify and describe them accurately.



1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

The critical skill is knowing what should happen and what is expected in the light of what has been planned and defined to happen.

Once a user knows what should be happening it is easy to see a problem and possibly identify what might be causing the problem.

In short, if we know 'normal' then we can spot 'abnormal'. It flows from this that every user should have a clear expectation of what they expect from technology and what it should do.

Notice how this is an aspect of the user managing their technology rather than being managed by it.



TEACHING TIP

Share the following idea with learners:

“If you know what should happen then you can describe what isn't happening, which is half way to solving it”.



Scenario 4

Learning activity:

It is really important to know what the best software is to use for the activity that is desired. Examples would be not trying to write letters using a spreadsheet package or using word processing package to give a presentation.

Ask learners to revisit the [Activities and technology sheet](#) list and name applications they might use for each of the activities. (Entry level)

Ask learners to think how they currently achieve all the things they might want to do with technology, using the activity sheet to make notes or write down suggestions. Some may prefer to complete a spider diagram. (Level 1)

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



Scenario 4

Learning activity:

What to do if it the hardware isn't working

A good plan is to follow a line from the plug to the screen, making sure there is a continuous line. Sometimes, settings have been set to 'off' or 'mute' or 'blank screen' and need to be checked.

Ask learners what they would do if a device stopped working.

Answers should include:

- Check the wires and connections
- Ask for help from someone
- Use the help menu
- Search YouTube for a solution

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

What to do if the software isn't working as planned

The rule is keep going.

1. Did you use the right software for the task you designed?
2. Might there be compatibility issues or the use of software that is not up to date?
3. Is a dated device being used to run cutting-edge applications?



TEACHING TIP

Search for a YouTube video. Learners should be encouraged to explore what others can do with the same software.

Online discussion and support pages are available for every device and piece of software.

YouTube videos are an excellent extra resource to follow the ideas of others. Again, being able to define the problem is critical to success.



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Installing software

Software products are kept in the cloud in App stores.

App stores can be searched specifically or browsed generally as in a normal shopping experience. Software can be downloaded in a process that is automatic, interrupted only where a permission to install is needed.



TEACHING TIP

Open the Google/Android shop, the Apple store and the Microsoft store to show all three and provide a general tour.

Many learners will already be familiar with searching for apps in one of these app stores. (Entry level)



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Automatic updates

Applications are regularly updated to add improvements and remove bugs.

Bugs are very often caused by problems of compatibility as operating systems and applications update at different times and, obviously, in different ways. This can come sometimes cause unforeseen issues.



TEACHING TIP

Adding automatic updates (Level 1)

Demonstrate how automatic updates are added in settings on projected board for learners to follow.

Scenario 4

Where an issue cannot be fixed simply, there are five types of expert help.

1. Consult the IT help desk where the problem occurs in work and there is such help available.
2. Refer to the relevant manual and/or help menu.
3. Visit the software manufacturing site and explain the problem.
4. Write the problem into a search bar and see if it returns any conversations that discusses the particular problem being experienced.
5. Go to YouTube and see if there are any 'self-help' explanations that covers your technology issue.

Wherever possible, being able to define the problem is needed. Just saying 'it doesn't work' is not helpful and means the problem can only be resolved by handing over the device to an expert. This rules out any kind of self-help.





Scenario 4

Summary

Using technology has huge benefits that touches all aspects of modern life.

Expertise in technology is for experts and the rest of us just need to know how to use it well. Usually, help videos are designed for beginner users.

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)



TEACHING TIP

The outcome of this scenario should help move users from being fearful of technology because they don't understand it, to being curious about how to use it.



Scenario 4

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Extension activity

Ask learners to refer back to the list of activities where technology can play a role. ([Activities and technology sheet](#)).

Ask them to reconsider what they have and might want in the light of what they have been considering. How they can best meet that aim with what they have available to them and what they may need to change to achieve a better fit.



TEACHING TIP

In the light of all that has been considered, ask each learner to think through where there are gaps in their use of devices and their components, between what they currently do and would like to do. From this invite them to devise a personal plan. (Entry level).

Ask learners to search for the names of devices online and see what they offer in terms of functionality, size, speed, and price. (Level 1)



Scenario 4

Further resources

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)

Reference to the quote on technology as a tool. <https://teaching.berkeley.edu/resources/engage/incorporating-technology-your-teaching>

The extensive help library for using Moodle effectively. <https://moodle.org/mod/forum/view.php?id=50>

Mahara Manual, showing how effectiveness, efficiency and problems are dealt with in the same manual as aspects of simply getting more from the software. <https://manual.mahara.org/en/19.10/>

Use Wikihow to ask how to update software. <https://www.wikihow.com/Main-Page>

How to turn on automatic updates for Microsoft operating system. <https://support.microsoft.com/en-us/help/15081/windows-turn-on-automatic-app-updates>

How to turn on automatic updates the Apple IOS operating system. <https://support.apple.com/en-us/HT202180>



Scenario 4

Appendices

Select the links to open the PDFs for the appendices.

[Appendix 1 – Activities and technology](#)

[Appendix 2 – Physical components list](#)



Original materials created on behalf of the Education and Training Foundation and funded by the Department for education

1. [CONTENTS](#)
2. [INTRODUCTION](#)
3. [USING DEVICES](#)
4. [MANAGING PROBLEMS](#)
5. [SUMMARY](#)
6. [EXTENSION](#)
7. [FURTHER RESOURCES](#)
8. [APPENDICES](#)