Agriculture, Land Management and Production – Common Core

Essential Skills Guide

Skills Builder PARTNERSHIP

Technical Education Networks

About this Guide

This guide has been produced by Skills Builder Partnership to support teachers with identifying and utilising opportunities within the T Level curriculum to develop and progress their students' essential skills. It can be used in a variety of ways including in curriculum planning, schemes of learning and/or lesson plans.

What are essential skills?

At Skills Builder, we define a skill as a repeatable action whereby the more you do it, the better you become. It's something that can be taught.

Essential skills are those highly transferable skills that everyone needs to do almost any job, which make specific knowledge and technical skills fully productive. They are therefore distinct from basic skills (literacy, numeracy and digital skills) and technical skills (specific to a particular sector or role, sometimes drawing off a particular body of knowledge).

Essential skills can unlock learning in the classroom, boosting academic outcomes, perseverance and self belief. They halve the likelihood of being out of work, and increase earnings across a lifetime. They even boost wellbeing and life satisfaction. You can read more on the research around essential skills on the Skills Builder website.

The Universal Framework

The Universal Framework: The Skills Builder Universal Framework is a tool for measuring and building essential skills. It breaks the 8 essential skills down into a sequence of steps, starting from absolute beginner through to mastery. It is supported by research and was developed with leading businesses, academics and educators. It consolidates an array of different skills frameworks into something comprehensive and practical.

The Universal Framework was Developed by the Essential Skills Taskforce: for more information see [Towards a Universal Framework for Essential Skills]

Agriculture, Land Management and Production

Essential Skills Guide

Building your students' essential skills:

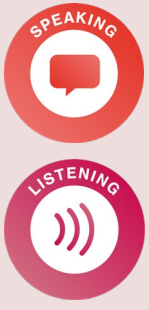
Students can complete an online self-assessment using the Skills Builder Benchmark tool to discover their initial skill score. Alternatively, you can use the Universal Framework as a useful tool to explore what progress in a particular skill might look like for your students.

- You may find that your students have different starting points and will develop their essential skills at different rates and through different experiences, such as industry placements and classroom activities. Students' progress through the skill steps may not be linear.
- You may wish to use some of the suggested activities in this guide to support your students in their learning journey and to build their essential skills as they progress through the T Level course.
- The activities suggested in this guide are not an exhaustive list and there will be other ways to develop these core skills.

In the T Level specification for **Agriculture, Environmental and Animal Care**, there are six core skills identified, with the main essential skills supporting development of these core skills below:

Core Skill A:
Analysing

Core Skill B:
Communication



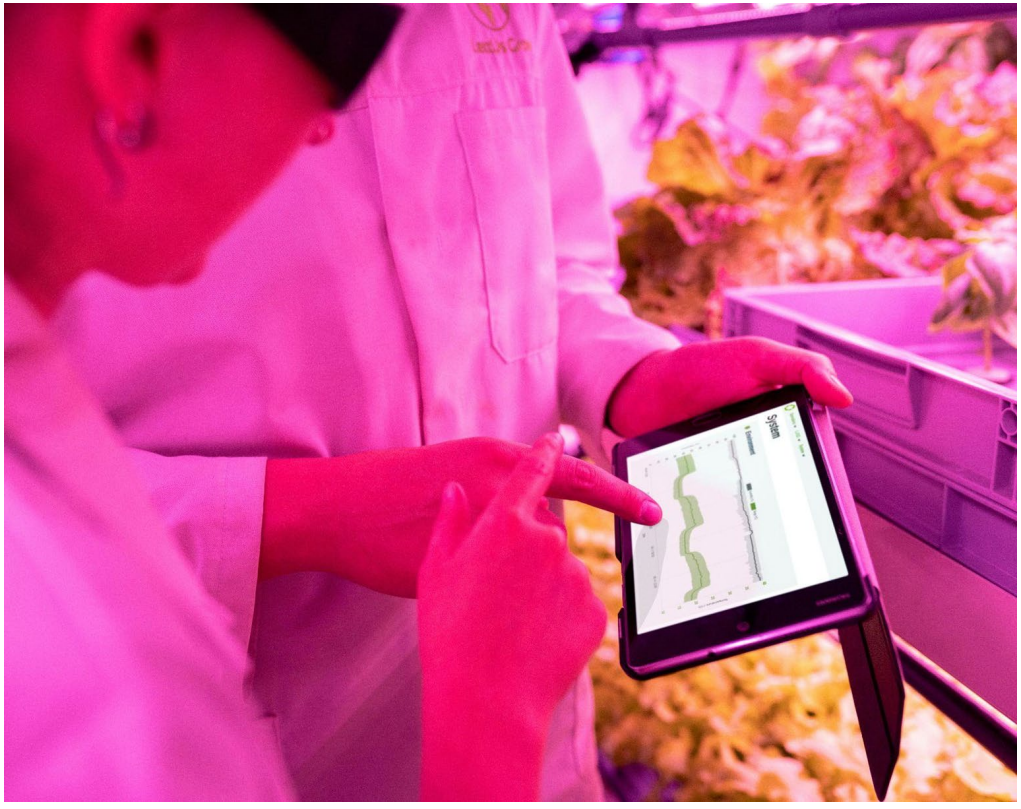
Core Skill C:
Critical thinking

Core Skill D:
Decision making

Core Skill E:
Investigating

Core Skill F:
Working in a team

Core Skill A: Analysing



Why analysis skills is important for students to progress in their future career:

- **Data-driven decision making:** Strong analytical skills enable agricultural professionals to interpret complex data sets, helping to optimize operations, potentially improving crop yields, and increasing profitability.
- **Problem-solving:** Analytical skills empower support tackling complex agricultural challenges by systematically breaking down problems, identifying root causes, and developing effective solutions.
- **Technology integration:** Critical analysis capabilities are crucial for evaluating and implementing new agricultural technologies, ensuring their optimal application and maximizing their impact on productivity and sustainability.

Core Skill A: Analysing

To develop this core skill, building essential skills in problem solving and staying positive are important.

Examples this may be evidenced through:

- analysis of qualitative and quantitative data and information;
- identifying common features, organising into types, discerning patterns;
- deconstructing, classifying and ordering.

Build students' Problem Solving skills

Can students complete tasks by following instructions?

STEP 0

Example activities to develop this:

- Students **create** a set of instructions for a particular task.
- Students **swap** their instructions with another group and **reflect** on what makes good instructions and how to follow them.

Can students explore problems by creating different possible solutions?

STEP 5

Example activities to develop this:

- **Set** students a problem such as the consequences of poor standards of health and safety practice.
- In groups or pairs students **produce** multiple solutions on how to mitigate these poor standards of health and safety practice.
- Students **share** these ideas a class and **discuss** the impact of these.

Can students explore complex problems by building their understanding through research?

STEP 7

Example activities to develop this:

- Students **evaluate** the different employment rights and responsibilities of an employee, by finding at least 3 different sources of information.
- Students **compare** the sources and discuss the reliability of the different sources identified.

Build students' Staying Positive skills

Can students keep trying when something goes wrong and think about what happened?

STEP 4

Example activities to develop this:

- Students **reflect** on an experience when something went wrong (or could share an example one).
- Students **analyse** what happened, **consider** if anything could have prevented it and **consolidate** what learnings they can take from it for the future.

Can students look for opportunities in difficult situations?

STEP 7

Example activities to develop this:

- Present **students** with a scenario where something unplanned has happened such as the cost of goods has increased.
- Students **identify** opportunities that could be explored when dealing with the situation.
- Students **create** their own scenarios and exchange in pairs to suggest potential opportunities.

For more ideas and resources to build your students essential skills check out the Universal Framework and the Problem Solving and Staying Positive workshops.

Core Skill B: Communication

Why developing communication skills is important for students to progress in their future career:

- **Stakeholder collaboration:** Effective communication skills supports collaborating with diverse stakeholders, from farmers and suppliers to policymakers and consumers.
- **Knowledge transfer:** Strong communication abilities are essential for sharing complex agricultural information, research findings, and best practices with colleagues, clients, and the wider community.
- **Marketing and advocacy:** Communication skills supports the effective promotion of sustainable practices, and advocate for the industry's interests to various stakeholders.

Core Skill B: Communication

To develop this core skill, building essential skills in speaking and listening are important.

Examples this may be evidenced through:

- reading, writing, listening and speaking through the use of visual, oral and written methods;
- demonstrating active listening;
- building a rapport and engaging an audience;
- adapting style and tone to audience needs and nature of the message.

Build students' Speaking skills

Can students speak effectively by making points in a logical order?

STEP 3

Example activities to develop this:

- Students **create** a presentation on an agricultural process such as supply chain logistics or a particular crop growing process, this could be to a technical or non-technical audience.
- Students **focus** on the order in which they present information and how this might impact their audiences' understanding.

Can students speak effectively by using appropriate language?

STEP 5

Example activities to develop this:

- Students **identify** key technical terms and identify the corresponding appropriate non-technical terms.
- Students **participate** in a role play with different agriculture scenarios. Students **consider** the language they are using and **practice** both technical and non-technical language.

Can students speak engagingly by using facts, visual aids and examples to support their points?

STEP 7

STEP 8

Example activities to develop this:

- Students **prepare** a presentation about the productivity of an agriculture organisation.
- Students **suggest improvements** to the agricultural organisation using visual aids and facts to support their suggestions.

Build students' Listening skills

Can students listen to others and record important information?

STEP 5

Example activities to develop this:

- Students **listen** to a project brief and **record** the key pieces of information.
- Students **compare** the information they recorded and **discuss** the different methods they can use to take notes.

Can students use open questions to deepen their understanding of what they heard?

STEP 7

Example activities to develop this:

- Students **categorise** a list of questions as open or closed.
- Students **listen** to part of a project brief and **create** a list of open questions to improve their understanding.

Can students show they are listening by summarising or rephrasing what they have heard?

STEP 8

Example activities to develop this:

- Students **listen** to a set of instructions for a process or procedure. Then **summarise** what they heard.
- In pairs students **role play**, one student has a set of instructions they must share and the other must rephrase what they heard. Students swap roles.

For more ideas and resources to build your students essential skills check out the Universal Framework and the Speaking and Listening workshops.

Core Skill C: Critical thinking

Why developing critical thinking skills is important for students to progress in their future career:

- **Informed decision-making:** Critical thinking is needed to evaluate complex information from multiple sources, leading to more rational and effective decision making and policy development.
- **Innovation and problem-solving:** Critical thinking skills foster innovation by allowing professionals to challenge existing practices, identify novel solutions, and adapt to rapidly changing landscapes.
- **Risk assessment and management**: Critical thinking is crucial for accurately assessing and mitigating the various risks inherent in agriculture, from market fluctuations to environmental challenges.

Core Skill C: Critical thinking

To develop this core skill, building essential skills in problem solving and creativity are important.

Examples this may be evidenced through:
- problem solving, decision making;
- researching and planning to include questioning, evaluating pros and cons;
- using logic and reasoned argument, synthesising and concluding.

Build students' Problem Solving skills

Can students explore complex problems by identifying when there are no simple technical solutions?

STEP 6

Example activities to develop this:
- Students **evaluate** a list of problems regarding ineffective communication and **classify** them as simple or complex problems.
- Students **discuss** how their approach to problem solving might differ depending on if the problem is simple or complex.
- Students **create** a series of questions to help determine if a problem is simple or complex.

Can students explore complex problems by analysing cause and effects?

STEP 8

Example activities to develop this:
- Students **examine** the process of sustainable development and **discuss** how a set of proposed changes e.g., climate change may affect this.
- Students **discuss** the potential positive and negative effects the proposed changes could have.

Build students' Creativity skills

Can students generate ideas when they have been given a clear brief?

STEP 3

Example activities to develop this:
- Students **review** a land management brief.
- Students **produce** success criteria based on the brief.
- Students **design** a possible solution that fits the criteria.

Can students generate ideas to improve something?

STEP 4

Example activities to develop this:
- Students **review** the system in place for a particular agricultural process, such as supply chains, crop management or plant growing.
- Students **suggest** ways the system or process could be improved.

Can students develop ideas by asking themselves questions?

STEP 9

Example activities to develop this:
- **Present** students with an agricultural challenge.
- Students **produce** a range of initial ideas to tackle the challenge.
- Students **review** their ideas (or their peers) and come up with 5-10 questions to challenge their work.
- Students use the questions to **redraft and improve** their ideas.

For more ideas and resources to build your students essential skills check out the Universal Framework and the Problem Solving and Creativity workshops.

Core Skill D: Decision making

Why developing decision making skills is important for students to progress in their future career:

- **Resource allocation**: Effective decision making skills enable agricultural professionals to optimally allocate limited resources such as land, water, labour, and capital for maximum productivity and sustainability.
- **Crisis management:** Strong decision making abilities are crucial for responding swiftly and effectively to urgent situations like disease outbreaks, extreme weather events, or market disruptions.
- **Strategic planning:** Decision making skills allow agricultural leaders to develop and implement long-term strategies that balance economic viability with environmental stewardship and social responsibility.

Core Skill D: Decision making

To develop this core skill, building essential skills in problem solving and aiming high are important.

Examples this may be evidenced through:
- clarifying logical choices and identifying likely impact;
- using evidence and advice, justifying, substantiating and concluding.

Build students' Problem Solving skills

Can students create solutions for complex problems by generating a range of options?

STEP 9

Example activities to develop this:
- Students **identify** a problem they may be faced with in the workplace.
- Students **produce** at least 3 different possible solutions for the problem.
- Students **discuss** the potential outcomes the different solutions could produce and choose their preferred option.

Can students create solutions for complex problems by evaluating the positive and negative effects of a range of solutions?

STEP 10

Example activities to develop this:
- Students **identify** a complex problem they have worked on.
- Students **reflect on** the approach they used to address the problem.
- Students **consider** the implications of their approach and **suggest** alternative approaches they could have taken that may have addressed them.

Build students' Aiming High skills

Can students work with pride when being successful?

STEP 3

Example activities to develop this:
- Students **reflect** on a time they have been successful; how did they know they were successful?
- Students **reflect** on what motivates them to be successful and **share** strategies they can use to motivate themselves in their education and in the workplace.

Can students set goals for themselves?

STEP 5

Example activities to develop this:
- Students **reflect** on a personal achievement.
- Students **reflect** on the factors that helped them with the achievement.
- Students **consider** a potential achievement in the short term and in the long term.
- Students **produce** a plan to help them work towards their achievements. They could explore the idea of SMART targets.

Core Skill E: Investigating

Why developing investigating skills is important for students to progress in their future career:

- **Problem diagnosis:** Strong investigative skills enable agricultural professionals to accurately identify the root causes of issues such as crop failures, livestock diseases, or soil degradation.
- **Research and development:** Investigative abilities are crucial for conducting effective agricultural research, from designing experiments to collecting and analyzing data for new crop varieties or farming techniques.
- **Market analysis:** Investigating skills allow professionals to thoroughly research and understand market trends, consumer preferences, and competitive landscapes, leading to more informed business decisions.

Core Skill E: Investigating

To develop this core skill, building essential skills in problem solving and aiming high are important.

Examples this may be evidenced through:

- obtaining information and data including identifying potential sources;
- developing search criteria/queries;
- interrogating data;
- designing and carrying out tests.

Build students' Problem Solving skills

Can students complete tasks by finding the information they need themselves?

STEP 3

Example activities to develop this:

- Students **compile** a list of resources that could be used to learn more about a set topic.
- Students **create** a set of questions that other groups must answer using only the sources of information on the list.
- Students **reflect** on the different ways they can find information.

Can students explore problems by creating different possible solutions?

STEP 4

Example activities to develop this:

- **Present** students with a potential problem they might encounter while undertaking a project, e.g., financial restrictions.
- Students **produce** three different solutions to the problem.
- As a class **discuss** the different options and select the best potential solution.

Build students' Aiming High skills

Can students set goals informed by an understanding of what is needed?

STEP 6

Example activities to develop this:

- Ask students to **consider** what the objectives may be for different roles within a project team e.g., legislation, budget, material, waste disposal, workforce etc.
- Students **consider** how the different objectives may impact each other and what relevant data different stakeholders may require.

Can students create plans that include clear targets to make progress tangible?

STEP 11

Example activities to develop this:

- Students **review** an agriculture project plan and evaluate the targets or objectives using the concept of SMART targets.
- Students **rewrite** targets to meet the SMART target criteria.

Core Skill E: Investigating

Why developing team working skills is important for students to progress in their future career:

- **Interdisciplinary collaboration:** Strong teamwork skills enable agricultural professionals to effectively collaborate across diverse disciplines, combining expertise in areas like agronomy, engineering, economics, and environmental science for comprehensive solutions.
- **Project management:** Teamwork abilities are essential for coordinating and executing complex agricultural projects, from implementing new farming systems to managing large-scale conservation efforts.
- **Knowledge sharing and innovation**: Effective team-working skills foster an environment of open communication and idea exchange, leading to increased innovation and continuous improvement in agricultural practices.

Core Skill F: Working in a team

To develop this core skill, building essential skills in teamwork and leadership are important.

Examples this may be evidenced through:

- mutual support, open communication, respect and honesty;
- developing new ideas and interpretations;
- providing support, advice and guidance;
- reflecting, inviting and providing feedback on own and others' performances.

Build students' Teamwork skills

Can students work well with others by taking responsibility for their tasks?

STEP 3

Example activities to develop this:

- Students are each given one aspect of a land management plan.
- As a group they must **combine** all the different aspects to **determine** an overall plan.

Can students work with others by supporting others if they can do so?

STEP 4

Example activities to develop this:

- **Create** a group task with clearly defined roles and tasks, ensuring that some tasks will take longer or are more complicated.
- Set a time limit for the group to **complete** the task. Once the time limit is over, ask students to **reflect** on how the task went and if those who completed their tasks supported others in their role.

Can students contribute to group decision making?

STEP 6

Example activities to develop this:

- Students **research** a relevant piece of environmental legislation.
- Students **share**, in groups, what they have learnt.
- Given a specific scenario, groups must **reach a unanimous consensus** on the most appropriate purpose and implication for not following the environmental legislation based on their understanding.

Build students' Leadership skills

Can students manage time and share resources to support completing tasks?

STEP 4

Example activities to develop this:

- In groups students are tasked with **managing** an agricultural scenario-based workplace and allocated a number of staff and resources to work with.
- Each group must **produce** a plan for how the required daily and weekly tasks will be managed. Specifying how they will use their resources effectively.

Can students recognise their own strengths and weaknesses as a leader?

STEP 7

Example activities to develop this:

- Students **reflect** on a great leader of their choice and **consider** the strengths and weaknesses of their chosen leader.
- Students **self-reflect** on their own strengths and weaknesses as a leader and **consider** activities to help them develop their weaknesses.

Students recognise the strengths and weaknesses of others in their team and allocate roles accordingly?

STEP 9

Example activities to develop this:

- Students are given a set of staff profiles and available jobs.
- Students **match** the staff profiles to the jobs they are most suited for and **justify** their choice.

For more ideas and resources to build your students essential skills check out the Universal Framework and the Leadership and Teamwork workshops.

For more information on building your student essential skills please visit the Skills Builder website at https://www.skillsbuilder.org/

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