General

This chapter is part of a new phase of learning for students. It will help students to become more independent, to take early steps for themselves and to develop their skills, without the pressures of assessment. In this section, the emphasis is on independence in remembering and attempting to use skills, and on students beginning to be independent in setting up their own work.

For the teacher this means starting to move into a mentoring and guidance role, controlling the environment rather than the students. It means focusing on praising attempts at independence, asking questions to develop thinking and an almost terrifying move away from “getting it right”. If you are setting targets, these could relate to independence, motivation and trying to think of the next step or to the next level. Try not to worry about performance yet. It will come with practice, and with that willingness to think to the next level.

For the students this transition can be terrifying, but also liberating. As in Section 1, students will need:

- reassurance that it is ok not to be perfect – failure, mistakes and partial attempts are all acceptable, and indeed, essential parts of the learning process
- encouragement to try thinking and acting for themselves.
- reminders that the content is important and interesting, but that the ability to find, think about and use information is much more important than the actual information
- support as they learn to direct and manage their own learning – it is particularly important to give students time to make this step, rather than giving up in frustration and telling them what to do.

Guidance to activities

Activity 5.1

As in Section 1, encourage students to choose in line with their interests, but also to keep their minds open to change as they gain new information.

Consider how well it can work for your class to have groups of students working on different topics or different aspects of the topic. Students do not need to come out of the course with the same knowledge, but rather with the same skills and the same ability to think about their knowledge.
As students gain independence, it should be possible, for example, for one group of students to work on a specific coastal engineering project (and its personal, national and global perspectives), while another group works on political agreements regarding deforestation, another works on the possibilities for synthesising medications in the lab rather than using rainforest plants, and a fourth group works on a topic from chapter 7 on water, food and agriculture. Being able to make some choices in their learning can inspire and motivate even quite challenging students. This kind of organisation, with groups working on different content, can also help teachers to avoid the trap of delivering content rather than encouraging skills development.

**Activity 5.2**

Encourage students to think about the issues, consequences and perspectives rather than about the answers to the questions. Encourage students to find a way of working which helps them to clearly separates issues, consequences and perspectives (but acknowledge an overlap if necessary). This might include: the use of colours; internet searches; skim reading; note taking; use of diagrams; reference to Skills Section 2, figures 2, 3 and 4; reference to Skills Section 1, figures 3a, 3b and 4.

Do all students need to work on all of these? Are they better off choosing two to consider? Could students use their diagrams, posters and so on to present their thinking to the class or to make attractive displays which focus on the Global Perspectives skills?

Examples of possible student responses to question (a) are:

<table>
<thead>
<tr>
<th>We need mangroves as a barrier between the coastline and the sea. They are important. They are breeding grounds for shrimps.</th>
<th>© The student has done some research but has focused on the content and on answering the question rather than on considering issues, consequences and perspectives. Encourage this student by asking what the consequences could be of not keeping mangroves.</th>
</tr>
</thead>
</table>

**Issue:** What is the best way to preserve coastlines around Mumbai?

**Consequences:** No mangroves → coastal erosion + loss of breeding grounds for shrimps.

**Perspectives:** Locally, people might want to build more modern facilities and enjoy modern living.

| © This student has clearly separated the issue from possible consequences and perspectives. Encourage the student to develop their thinking about the consequences and the perspectives – what might be the consequences of coastal erosion for local people? What other perspectives might there be? |

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**Activity 5.3**

Encourage independence here – help students to refer back to the relevant skills from Skills Sections 1 and 2, and to set up their own procedures. They could, for example, ask, “Where are you going to look to remind yourself about identifying key issues?”

As students are working, interact with them by asking questions to prompt deeper thinking and independent recognition of areas that need attention. For example: What is it that’s causing problems? You can’t think of any global perspectives? Well, are there any international consequences? Are there any international actions that could be taken?
Does this matter at all to people in other countries? Why?
Some students may be ready to consider that there may be multiple national perspectives on an issue. Be ready to discuss this with these students.

**Activity 5.4**
Encourage independence and use questions to prompt development. Assist students in setting up their own procedures and in referring back to the relevant parts of Skills Sections 1 and 2. Try to help students to spot changes or improvements they need to make, but emphasise independence and interest over performance at this stage.

**Activity 5.5**
There are suggested answers here, but at this stage it is more important for students to begin to set up strategies they can use to help them to answer these questions independently than it is for them to achieve a specific level in their answers. Encourage students always to move one level deeper or further by asking questions.

Note also that the sample answers are not “expected” answers in terms of level. They are examples of ways that students can be encouraged to develop their thinking. For some students, identifying the consequences at all will be success for them. Others will be able to say that the consequences are reasonable (or not) but struggle to identify why. Some will be ready to push their thinking much deeper.

(a) We need to know whether Adam’s uncle has memories of DDT use and its consequences, or whether he is in a position to know about DDT use and its consequences (for example, if he is a scientist, teacher, historian). We also need to know whether he tends to be truthful or whether he exaggerates.

(b) Adam tends to exaggerate: “politicians never think their decisions through”; “killed all the birds”; “now there are no bees”; “going to be a total disaster”. This makes him less reliable. We can assume that Adam is quite young and not an expert, because his main source of information is his uncle, and this makes him less reliable also. We need to know whether he has done any research into bees and pollination, and whether he might have a reason to lie or to only tell part of the truth.

Dinesh is presenting argument and prediction rather than information, so we have limited information about how reliable he is in what he says. We need to know whether he has researched this issue, whether he is an expert, whether he has any reason to support one view in particular, for instance, is he working for an agency like Greenpeace?

(c) Adam tends to exaggerate quite a lot, which is a shame, because it undermines a basically sound line of reasoning. It would be easy to dismiss Adam for exaggerating rather than listening to his ideas.

“It just killed all the birds”: This is too extreme. DDT may have killed many birds, but there are still birds around today so this is not a realistic consequence. However, the idea that DDT had harmful consequences for
birds is reasonable.

“There are no bees”: This is also far too extreme. Pesticides are killing significant numbers of bees, but it is not true to say that there are “no bees” therefore this is not yet a consequence, and is unlikely to be.

“This is going to be a total disaster”: The problem here is that it is too general and too vague, so seems more exaggerated than it is. Of course the consequences of insufficient bees pollinating food crops will be serious – disaster might not be an exaggeration here. It is likely that there will be food shortages, prices will rise, people will go hungry, and this can lead to riots, civil unrest, political instability, conflict, humanitarian crises and so on. It is also likely that people will find ways to protect or bring back bees, move toward wind pollinated crops, employ people (at slave wages) to pollinate plants using paint brushes (as they currently do in some plant nurseries) and find new ways to ensure that plants are pollinated.

(d) Dinesh suggests some plausible and reasonable consequences, but doesn’t really show why these consequences are likely, or why they are more likely than rules about use of biodiversity helping to protect it. He also states and implies that these are bad consequences without saying why. He might be right on both counts but he hasn’t said why!

[Making a set of rules about how our biodiversity can be used] “will result in a price tag on biodiversity”: It is possible that setting rules could lead to costs and prices being affected – this would certainly be one way of enforcing rules, for example, “Yes, you can cut logs use that plant for medicines, but you will have to pay $20 billion”. This would be a very complex process with a lot of complex steps of causes and consequences. Dinesh seems to have a problem with this because of a further consequence, that the rich will be able to exploit resources more than the poor. But there is an alternative: the rules could be set up to protect the interests of poorer countries.

“We’ll only conserve the things we understand the value of”: This seems a very likely consequence, as it would be hard to persuade people to take losses now for the sake of resources that they think have little value. An alternative consequence would be that we conserve all ecosystems and biodiversity equally, but this seems much less realistic, as we have limited resources.

“It will be a way of rich countries gaining commercial benefit while poor countries are exploited”: This is also possible and even, sadly, likely. It is likely that the rich countries would have a large role to play in setting up such rules, and might not even recognise that they were setting them up for their benefit. An alternative possible consequence is that the rules are well set up to protect the interests of poor countries in their diverse ecosystems, but this might be hard to achieve due to conflicts of interest in poor countries.

(e) Adam’s example of DDT is exaggerated and vague – it needs to be more grounded in real evidence. It doesn’t show that politicians never think their decisions through, but it does show that unintended consequences can be a problem. The example of the bees is also useful and relevant, but needs more evidence: Which pesticides? Are there many
studies that have been done? Is this a vague rumour or scientifically supported? How serious is the problem? How widespread is the problem? Is it a rich world problem only? Thirty per cent of our food needs to be pollinated – where does this come from? What does Adam want to achieve with this? Overall, Adam has a good idea of a problem, but doesn’t really use reasons and evidence well. He is too vague, exaggerated and not properly making a point.

Dinesh doesn’t give any evidence at all. His reasoning would do better if he had some evidence or argument to support the consequences he predicts – why these consequences and not others? Each of the consequences he suggests is a reason why making a set of rules about using biodiversity is a “terrible idea”. His argument is better structured and reasoned than Adam’s, but still problematic.

(f) Adam uses emotion when he talks about “total disaster” and “there are already enough hungry people”. He is appealing to our fears and sensationalism. Dinesh uses emotion when he talks about poor countries being exploited. He is appealing to a sense of injustice and unfairness.

(g) “Politicians never think their decisions through or consider the consequences”; “There are already enough hungry people”; “This is a terrible idea”.

Activity 5.6
Encourage students to attempt to set up their own procedures and to work independently (in groups, pairs or individually). Ask questions to prompt thinking to the next level.

Activity 5.7
Encourage students to really think about the issues, to spend time pondering in structured and unstructured ways. This activity is not about finding an answer but about finding your own place and perspective.

As in Skills Section 2, spend some time thinking about the difference between well thought through, supported opinions and prejudices. Encourage students to empathise but not to be governed by emotional responses.

Students might like to share plays, poems, film clips, and songs that are relevant to the issues, and talk about what they mean.

Activity 5.8
Encourage students to look back at the mini project plan from Section 1. They should remember how they approached the task, and think of ways to improve on that: What didn’t work last time? What can be made to work better this time?

Encourage students to think of one positive thing about the last attempt, and one area that needs improvement which they can focus on this time.

Encourage students to cooperate to find strategies to deal with classmates who did not pull their weight in the project last time. Can those students be made to feel more engaged? How? Can they be given a more personal stake in the project? Can they be made to feel that their contribution matters? Encourage students to consider that the attitudes of those who
are hard-working and conscientious might contribute to the attitudes (and low self-esteem) of those who are not.

Once again, encourage students to focus on task planning rather than content at this stage.

Example 1: Make a model of coastal erosion

(a) Leader – Josh; researcher – Ben, model maker – Ellie

(b)

<table>
<thead>
<tr>
<th>Task</th>
<th>Who will do it</th>
<th>When it should be done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>Josh</td>
<td>All the time</td>
</tr>
<tr>
<td>Research</td>
<td>Ben</td>
<td>Next week</td>
</tr>
<tr>
<td>Make model</td>
<td>Ellie</td>
<td>Two weeks</td>
</tr>
</tbody>
</table>

These students need to develop their thinking and planning. For assessment purposes this outcome is too limited, although it is acceptable for an introductory project. A model of coastal erosion sounds like a good part of a project, but on its own it is not really a global perspectives project – it doesn’t allow enough interaction with the issues, causes and consequences, or perspectives. Encourage these students to think about how they might use their model.

The plan needs to be broken down and made more specific. Ask the students what tasks Josh will be doing as leader, how the researcher and model maker will interact, what specific tasks contribute to research and model making.

Example 2: Outcome—make a display to show that the community needs to take action on coastal erosion

(a) Team – Josh, Ellie, Ben, Sunita, Kwami; leader – Sunita; creative director – Kwami

(b)

<table>
<thead>
<tr>
<th>Task</th>
<th>Who will do it</th>
<th>When it should be done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collect photos of the local coast before and after the storms</td>
<td>Josh</td>
<td>Some by next lesson; some in two weeks’ time</td>
</tr>
<tr>
<td>● Our own and those taken by our families</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Local press</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Internet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Make a model of local coastal erosion</td>
<td>Ellie</td>
<td>Start by next lesson; finish in three weeks’ time</td>
</tr>
<tr>
<td>Find examples of successful projects to limit coastal erosion</td>
<td>Sunita – link with cousins in Mumbai regarding mangroves; look up other natural ways to limit erosion Ben – concentrate on modern, technical ways to deal with coastal erosion</td>
<td>Bring first ideas from research to next lesson and discuss</td>
</tr>
</tbody>
</table>
Discuss progress | All | Next lesson
---|---|---

These students are on the right lines. Encourage them to think ahead a little more in their planning, so that they can schedule all the necessary tasks. Can model making be broken down into its stages? What about acquiring the materials for the model? Does Ellie need to do drawings first? What is Kwami going to be doing in the first part of the project? Can he be doing early preparations for the display? Getting materials? Helping others?

**Activity 5.9**

Encourage students to remember the procedures and processes they used in Section 1 to write their short report, and structure the work for themselves as much as possible. Talk to them about reviewing their research material and the diagrams and thoughts they have had on the material. Discuss selecting only the most useful and relevant ideas. Students can sometimes be reluctant to discard material that they have researched. Having a real or imaginary shelf for interesting ideas that you can come back to later can help here.

As in Section 1, encourage students to write one, two or three clear sentences for each heading, using their own words. Suggest that they use a maximum of one quotation per section, and/or refer to statistics briefly. For causes and consequences, students might be more comfortable using diagrams or charts, as used in the skills section. This is not intended to be assessment-ready work. Encourage relevance, clear summaries of the issues, use of own words and clear analysis of the issues. Discourage overly long responses, overload of information and long passages clearly taken without manipulation from sources. Some able students may find the restrictions frustrating, and may need to be reminded that selecting the right 300 words is a greater skill than producing 3,000 words with less thought.

**Activity 5.10**

Encourage students to think carefully about their project work. These questions will lead eventually to project evaluations, but at this stage students are only beginning the process. They may need assistance in considering problems and solutions without unpleasant recriminations or blame casting.

**Developing material from this section for assessment**

The tasks in this section are intended as introductory materials and not as assessment-ready work. However, the topics are on the IGCSE Global Perspectives syllabus and work in these areas can be submitted for assessment. If students choose to submit work in these areas, it is recommended that they revisit the areas after further study.

**Research questions**

The research questions suggested in the topic could be used for assessed
work, with more developed, analytical answers. It might be useful to move from “how” to “what actions could we/governments take”. Remember to always consider the global perspective as well as the personal and national perspectives.

**Projects**

The first project suggested in this topic is too limited to be submitted for assessment. It could be amended as follows:

Work with a school in a different country to suggest solutions to two different problems relating to ecosystem/biodiversity loss experienced by your countries. Make displays for an open day.

The second project needs only to include cross-cultural communication. Working with students from another country, perhaps T-shirts could be designed and sold to each other.