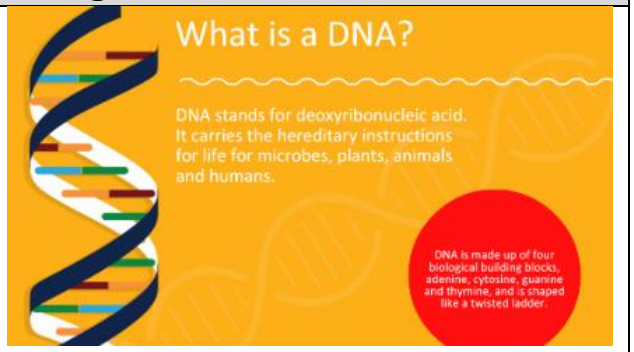
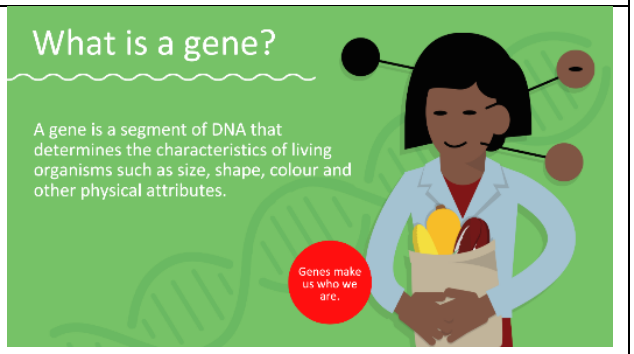
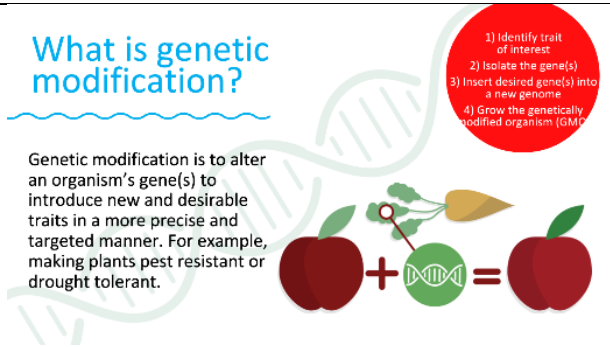
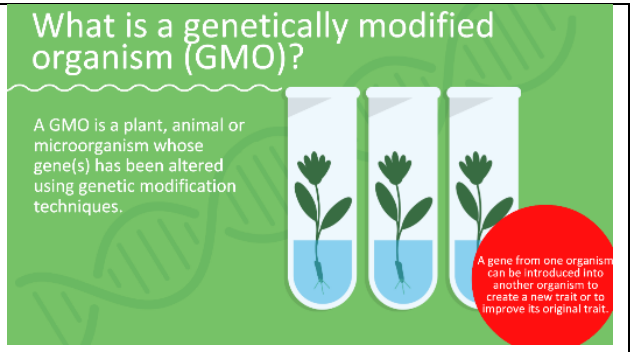
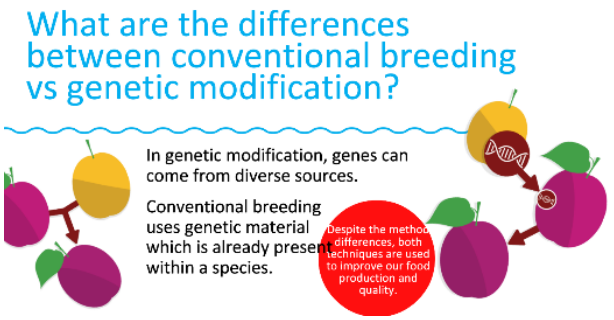
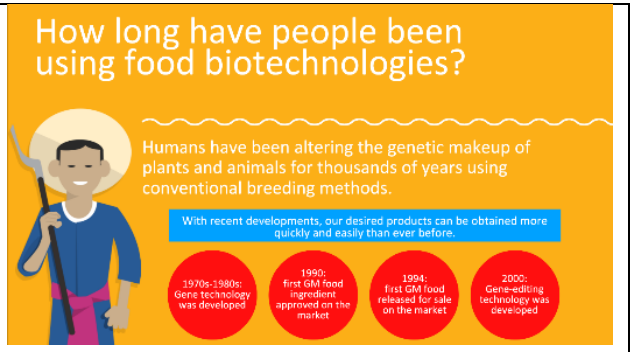
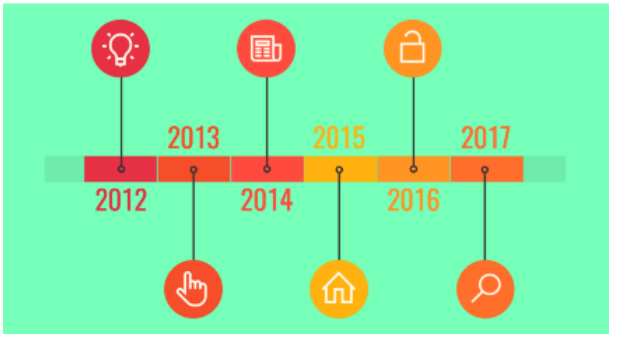
Revision plan for the materials

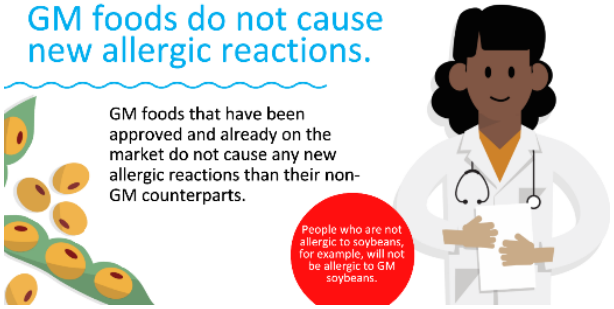
Tool 2	Proposed text	Proposed modifications for design
1.	• What is DNA? • DNA stands for deoxyribonucleic acid. It carries the hereditary instructions for all living organisms: microbes, plants, animals and humans. • DNA is made up of four biological building blocks: adenine, cytosine, guanine and thymine, and is shaped like a twisted ladder.	 • No change to be made.
2.	• What is a gene? • A gene is a segment of DNA, providing the instructions for specific characteristics or traits of living organisms such as size, shape, colour and other physical attributes.	 • Delete the red circle and the text inside.

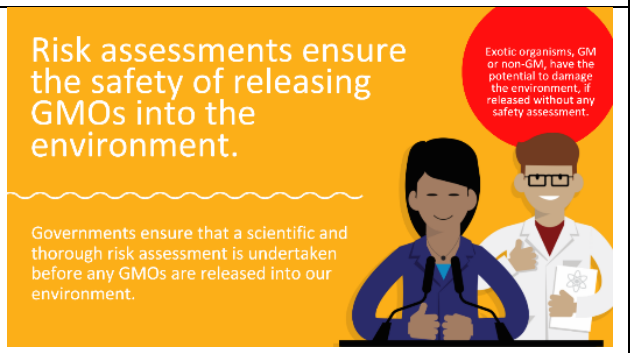
3.	• What is genetic modification? • Genetic modification is a process that alters an organism's gene(s) to introduce new and desirable traits in a more precise and targeted manner than traditional breeding. It enables scientists to transfer a specific gene(s) from one organism to another. • Typical steps in genetic modification: 1) Identify the trait of interest 2) Isolate the gene(s) 3) Insert desired gene(s) into a new genome 4) Obtain any required approvals from Governments 5) Grow the genetically modified organism (GMO)	 • Increase size of the red circle to encompass all the text. • Illustrate the two apples with one being browned. For the non-browned one, illustrate that DNA is inserted in a similar way to the original illustration. 

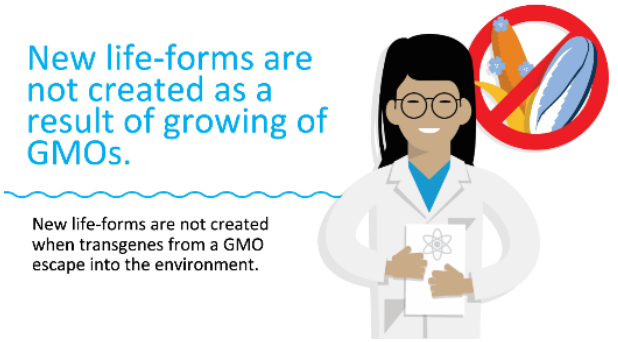
4.	• What is a genetically modified organism (GMO)? • A GMO is an organism such as a plant, animal or microorganism whose gene(s) have been altered using genetic modification techniques. • As a typical method, a gene from one organism is introduced into another organism to create a new trait or to improve an existing trait.	 • Illustrate only one flower grown in a small pot.
5.	• What is the main difference between genetic modification and conventional breeding? • In genetic modification, genes can come from sources with which the organism cannot breed. Conventional breeding is generally limited to genetic material which is already present within a species or closely related species. • Despite the differences in method, both techniques involve the transfer of genes and are used to improve our food production and quality.	 • Increase size of the red circle to encompass all the text. • Move the text in black or the red circle so that they are not overlapped

6.	• How long have people been using food biotechnologies? • People have been altering the genetic materials of plants and animals for thousands of years using conventional breeding methods. • With recent developments, our desired products can be obtained more quickly and precisely than ever before. • 1970s-1980s: Gene technology developed. • 1990: First GM food ingredient, GM chymosin, marketed for food use. • 1994: First GM food, the Flavr Savr tomato, released for sale on the market. • 2000s: Gene/genome editing technology developed.	 • Change the red circles to something similar to the below to look the design more like timeline. 

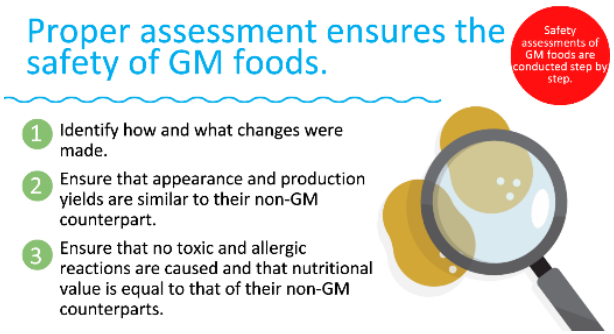
Tool 3	Proposed text	Proposed modifications for design
1.	• Are GM foods safe to eat? • Yes, approved GM foods are safe to eat. Before they are put on the market, governments examine rigorous safety assessments of GM foods. • GM foods are evaluated to ensure they are as safe as similar non-GM foods that have been consumed for centuries.	 • Remove the “seal of approval”.
2.	• GM foods on the market are safe for human consumption. • Prior to marketing, a developer assesses the safety of GM foods that are compared to the similar foods safely consumed over time. The results are submitted to the government for approval. This process helps ensure that the GM foods are as safe as similar non-GM foods that have been consumed for centuries. • GM foods have been on the market since 1994, when “Flavr Savr” tomatoes were introduced.	 • Remove the atomic symbol on the paper.

3.	• People have been eating DNA for ages. • DNA is found in foods of plant, animal and microbial origins. All DNA, whether it's from a GM food or a conventional food, is digested in the same way.	 • No change to be made.
4.	• GM foods that have been approved and are on the market do not cause new allergic reactions. • All GM foods are tested for allergenicity as part of the GM food safety assessment. • For example, people who are not allergic to non-GM soybeans, will not be allergic to GM soybeans.	 • Increase size of the red circle to encompass all the text.

Tool 4	Proposed text	Proposed modifications for design
1.	• Approved GM foods can be grown safely in the environment. • GMOs such as GM corn and GM tomatoes are assessed to ensure they are safe for the environment before they are planted. • GMOs have been grown for more than 20 years in countries such as Argentina, Australia, Canada, China, Mexico and the United States of America.	 • Adjust the text size and/or image location so that the text is not covered by the shield.
2.	• Environmental risk assessments examine whether it is safe to release GMOs into the environment. • Governments ensure that a thorough scientific risk assessment is undertaken before any GMOs are released into the environment. • Exotic organisms, GM or non-GM, have the potential to damage the environment and biodiversity, making safety assessments essential.	 • Remove the atom symbol from the clipboard. • Raise the text a bit upper in the red circle.

3.	• GMOs are monitored by farmers after they have been released into the environment. • Any information or evidence of unintended effects to the environment or human health must be reported immediately to the government. • The government has the right to take action, e.g. add conditions and revoke the authorization, as needed, against any GMOs based on available information.	 • No change to be made.
4.	• New life-forms are not created as a result of growing GMOs. • The potential for gene-flow, or the migration of genetic material from the GMO to other wild relatives, is reviewed as part of the environmental risk assessment. • Governments may prevent producing GMOs in certain places to mitigate the possibility of such occurrence.	 • Remove the atom symbol from the clipboard.

5.	• Many GMOs are designed to target a specific pest and can be used in ways to minimize the emergence of resistance in the target pest. • Non-target organisms are usually unaffected by such pest-resistant GMOs.	 • No change to be made.
6.	• Pests can develop resistance to anything, which may include the compounds that GMOs are designed to produce. Such compounds are specifically toxic to the target pests. • Various methods are used to prevent or minimize the development of pests' resistance, e.g. rotations or alternation of pesticides, and use of only recommended pesticide application rates. Research and development efforts continue.	 • Re-size text slightly to uncover from the graphic. • Re-position red circle slightly or the title text.

7.	• Proper containment minimizes the accidental release of GMOs. • The containment measures include designing an experimental greenhouse as appropriate, limited or restricted access to the greenhouse, record of the ongoing experiments, and decontamination of equipment. • In the event of an accidental release of unapproved GMOs, measures are taken to remove or remediate the released GMOs and prevent further releases.	 • Text in the red dot to be replaced with the one starting with “In the event of an accidental ….”
Tool 5	Proposed text	Proposed modifications for design
1.	• Scientific assessment ensures the safety of GM foods. • 1) Identify what changes were made. 2) Ensure that any added substances are not toxic or allergenic. 3) Ensure that the nutritional value of the GM foods is similar to that of their non-GM counterparts. • Safety assessments of GM foods are based on science and follow internationally-recognized standards from the Codex Alimentarius.	 • No change to be made.

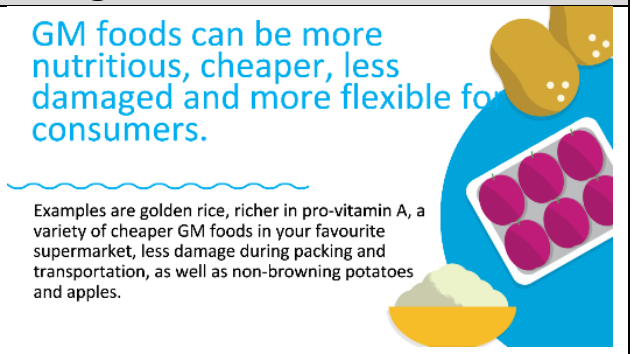
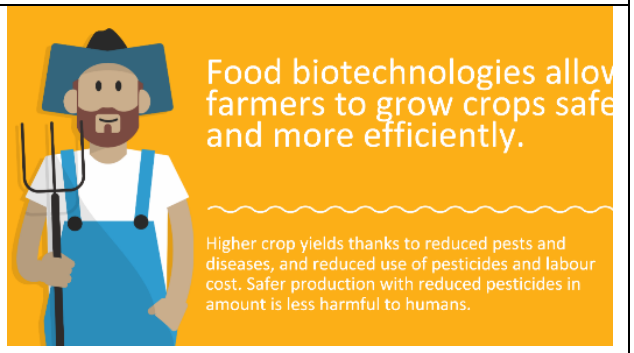
2.	• Governments examine GM food safety assessments to ensure that they are complete and that the foods are safe when consumed. • After the evaluations are done, governments make their decision on whether to authorize use of the GM food.	 • Remove the atom logo from the clipboard.
3. *	• Experience in GM food safety assessments differs from country to country, e.g. how many assessments have been conducted. • Some countries have been conducting GM food safety assessments since the 1990s. Countries that have carried out safety assessment typically make the results publicly available on their governmental websites and international platforms such as the FAO GM Foods Platform.	 • Combine the second and third bullet points and delete the red circle.

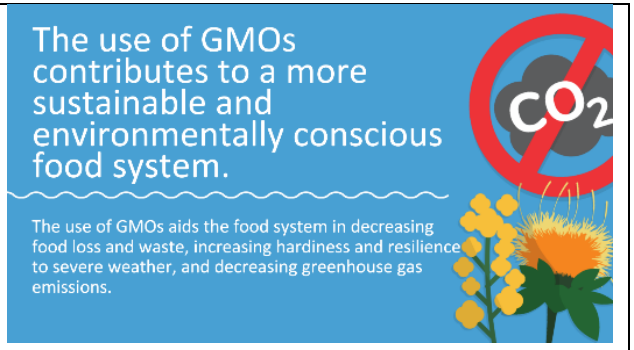
4. *	• All countries that have conducted safety assessments of GM foods have come to the same conclusion: approved GM foods are safe. • As of August 2020, more than 1600 results of the GM food safety assessments are available at the FAO GM Foods Platform (http://fao.org/gm-platform).	 • Delete the red circle and move the revised text to the place where the original second bullet point was shown.
5.	• GM foods are subject to more tests than their non-GM counterparts. • The rigorous data requirements for GM foods are not required for the non-GM counterparts.	 • Lower the image slightly to reveal the title, if the slide remains.

6.	• Why do we need to assess GM foods? • GM foods are assessed to ensure that these foods are as safe as similar non-GM foods. • The likelihood of a negative impact on human health is low, but should not be ruled out. This is why the GM foods are subject to safety assessments.	 • No change to be made.
Tool 6	Proposed text	Proposed modifications for design
1.	• Food biotechnologies are regulated to ensure that the foods produced with these technologies are safe to eat. • Governments ensure that all foods derived from biotechnologies are safe for human consumption, animal health and the environment. This supports public confidence in the decisions governments make on GM foods.	 • No change to be made.

2.	• Each government is responsible for regulating food biotechnologies in their country. • Regulations, which are informed by international standards and guidelines, may include setting health and safety standards, conducting safety assessments and communicating with the public.	 • Lower the image on seal of approval to reveal the title. • Change “seal of approval” to “licence for cultivation”.
3.	• Ensuring the safety of GM foods often involves collaboration across multiple governmental agencies. • Governmental agencies ensure GM foods are safe for human and animal consumption and ensure they are safe for use in the environment, including plant and animal health. • The way food biotechnologies is regulated varies from one country to another.	 • Change the current design and illustrate multiple governmental agencies.

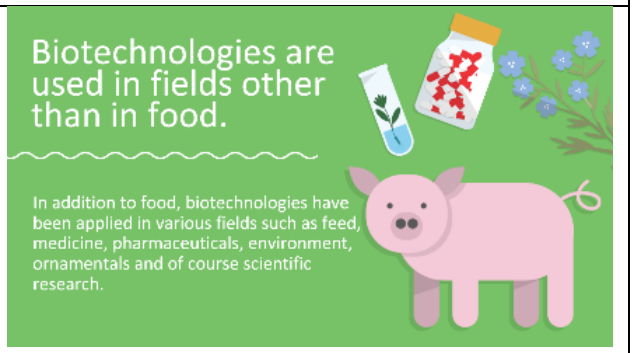
4. *	• Authorized GM foods may vary from country to country. • Some authorized GM foods include varieties of maize, cotton, soybean, canola, sugar beet, apple, alfalfa, plum, potatoes and papaya. • Various GM foods are authorized for food use and cultivation.	 • No change to be made.
5.	• The status of approval for GM foods varies from country to country. A GM food approved in one country may not be approved in another country. • This is not ordinarily due to health or safety related reasons, but typically because of differences in the timing of approvals or because there is no need for a particular food in the country.	 • Delete the red circle completely.
6.	• GM food labelling provides information on the method of production. It is not linked to safety concerns. • GM food labelling regimes vary among countries and, in any case, should be truthful and not misleading.	 • No change to be made.

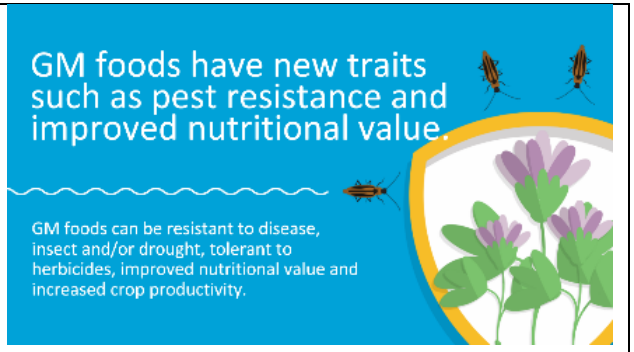
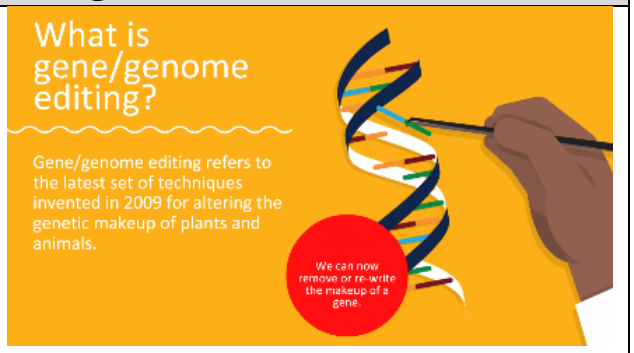
Tool 7	Proposed text	Proposed modifications for design
1.	• Genetic modification allows for consumers to have options to buy foods that are more nutritious, less prone to damage or browning, and less expensive. • Examples are crops producing healthier oils and potatoes that are more resistant to bruising.	 • Delate rice and plum, and add canola.
2.	• GM crops benefit farmers in developed and developing countries. • Scientific studies have shown that these crops have reduced the use of chemical pesticides, increased crop yields and increased farmer profits.	 • Make the text fit to the space.

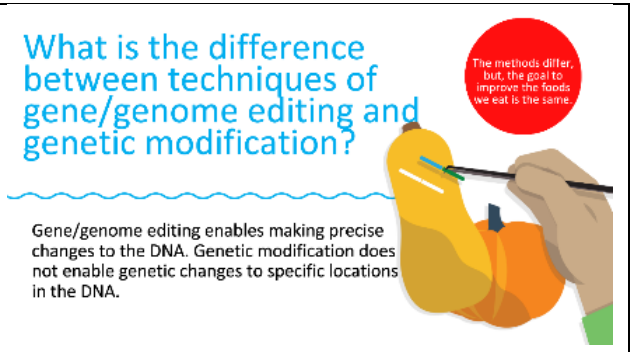
3.	• The use of GMOs can contribute to a more sustainable food system. • The use of GMOs can help support the food system by reducing food loss and waste, increasing resilience to impacts of climate change and planting areas, and decreasing greenhouse gas emissions.	 • Change the illustration of CO2 with strikeout through to a down arrow to indicate that CO2 decreases.
4.	• Some GMOs allow farmers to be more environment-friendly in their production practices. • Herbicide-resistant crops help farmers adopt improved conservation tillage practices. Use of smaller quantities of less toxic pesticides results in less use of farm equipment and lower greenhouse gas emissions.	 • Make the design not block the text.

5. *	• GM varieties can save crops and contribute to food security. • In Uganda, GM technology is protecting banana from bacterial wilt and cassava from brown streak disease. • Annual economic losses of US$ 300million due to banana bacterial wilt and US$24million due to cassava brown streak disease have been mitigated.	 • No change to be made.
6.	• GMOs can make agriculture more productive and add value to our foods. They represent an additional tool available to farmers and consumers to improve the food we produce and eat. • New varieties may be developed to resist pests, provide weed control for farmers, improve the nutritional profile of food, increase resilience to climate change and provide convenience to consumers.	 • No change to be made.

Tool 8	Proposed text	Proposed modifications for design
1.	• Various types of GM foods have been produced globally. • Canola, corn and soybean are the most common GM commodities and are typically used to make food products like cereals, snack chips and vegetable oils. • Apple, papaya, potato, summer squash, brinjal and sugar beet are some of the many other GM varieties produced in different parts of the world.	 • No change to be made.
2. *	• Approved GM foods are available on the market for human consumption in most countries. • Depending on the country, various GM varieties are already on the market.	 • No change to be made.

3. *	• GMOs are grown on all continents except Antarctica. • GMOs are grown all around the world, in countries such as Australia, Argentina, Brazil, Canada, India, the Philippines, South Africa, Spain and the United States of America. • The selection of GMOs cultivated such as soybeans, corn, sugar beets, canola and cotton depend on a country's geography, climate, regulation and its population's food preferences.	 • Replace pineapple and cantaloupe by corn and papaya.
4.	• Biotechnologies are used in fields other than in food. • Biotechnologies have been applied in various fields such as animal feed, medicine, environment, ornamentals, such as ornamental plants, and of course scientific research.	 • Make a big smaller.

5. *	• GM crops contribute to a reliable food supply. • GM crops have been designed to be insect resistant, herbicide tolerant or have improved nutritional value. • These traits can lead to increased crop productivity and reduced losses.	 • No change to be made.
Tool 9	Proposed text	Proposed modifications for design
1.	• What is gene/genome editing? • Gene/genome editing refers to the latest set of techniques that allow scientists to improve the characteristics of living organisms, including plants, animals and bacteria. • The technologies used for gene/genome editing work like scissors, cutting the DNA in a specific location, then remove, add, or replace known DNA sequences where the cut was made. With this technology. We can now more easily modify a gene.	 • Change from the stick to scissors.

2.	• What is the difference between techniques of gene/genome editing and genetic modification? • Gene/genome editing enables scientists to make precise changes (remove, add or replace) to the DNA. Typical genetic modification techniques do not enable genetic changes with such high precision. • The methods differ, but the goal to improve the foods we eat is the same.	 • No change to be made.
3.	• Gene/genome editing has potential benefits in many sectors including healthcare, food and agriculture, and conservation. • Gene/genome editing techniques are easier to perform, less expensive and faster. • For food and agricultural sector, gene/genome editing will enable scientists to more rapidly respond to agricultural challenges and may help ensure food security in uncertain times.	 Interchange the texts in the order of proposal.

4. *	• Ongoing research is being performed in many countries around the world. • Research includes topics such as: resistance to emerging pests and diseases, improved abiotic stress tolerance, crops developed specifically for small-scale farming and local food preferences, enhanced nutritional content and increased yields.	 • Remove the test tube and the flask from the image.
Tool10	Proposed text	Proposed modifications for design
1. *	• You can have a say in the approval process of GM foods • Your government invites public comments on results of the GM food safety assessment which are reflected in final regulatory decisions.	 • Change the illustrations on the cards to “I have a question” and “My submission”.

2. *	• Public comments about national regulations on food biotechnologies are welcome. • Your comments, concerns and suggestions help inform your government's decision-making.	 • No change to be made.