Top 10 Tips for Writing Great Challenges

Introduction

These tips are intended to help writers create a compelling and accurate Challenge. They apply to all types of Challenges, particularly those written by the Agents of Discovery team for the education market (formal and informal).

Before beginning to write Challenges, it is useful to go through a thematic development exercise. The Challenges should loosely follow a narrative that ties the Mission together as a cohesive experience. Mapping out, even walking with the Challenges in, the Mission site will help to ensure the theme plays out as intended in the physical setting.

Challenges will be written for different audiences and in many cases to meet specific educational standards. Educational standards are applied according to the client needs. For the informal sector, a useful source to guide in writing is the National Parks Service guidance on interpretive writing. https://www.nps.gov/idp/interp/230/module.htm

There are five parts to a Challenge, and they each serve to increase the interest of the reader: to learn more and to solve the Mission Challenges. It is important to know how to write a Challenge set. Pre- and post-Challenge content may be optional for informal markets.

1
- ❯ The pre-Challenge content needs to provide the context for the Challenge and help the participant solve it.
- ❯ The pre-Challenge image should support the pre-Challenge content.
- ❯ The Challenge can be standalone for informal markets. When it is it should not be a text-only Challenge, but include graphics. When part of a Challenge set, it builds on the pre-Challenge content and provides new knowledge.
- ❯ The post-Challenge content rewards the Mission participant by providing even more information about what they just learned - and provides some new knowledge that entices them to learn even more [this may be optional for informal markets].
- ❯ The post-Challenge image reinforces the post-Challenge content [this may be optional for informal markets].

2 There are different Challenge types.

- ❯ **Text Multiple Choice**
- ❯ **Image Multiple Choice**
- ❯ **Image Checklist**
- ❯ **Text Checklist**

- ❯ **Detective, Sound Matcher**
- ❯ **Text 50-50**
- ❯ **Image 50-50**
- ❯ **AR Catch**

Review the construction of each of these to be sure you are using the best possible Challenge type for the content. It's worth having a mix of Challenge types so the experience is varied during the Mission. An explanation of the Challenge types follows. Please note that the Audio Picker Challenge will need assistance from Agents of Discovery.

3 Whether you are working alone or with a team, make sure someone else is checking your work. **Ideally, test out the Challenges** with a sample of the participants they are intended for. The checklist is straightforward:

○ Does the pre-Challenge message help them answer the Challenge question?

○ Does the Challenge provide new information they didn't know before?

○ Does the post-Challenge message provide additional information that makes them even more interested in learning?

○ Does the Challenge make a human connection between the content of the Challenge and the person participating in it?

○ Does the Challenge content relate to and complement what the Mission participants will locate on the Mission site?

○ Are there any facts that were provided that they know to be false?

○ Do the words and the images/videos/audio match?

○ Can they comprehend it the first time they read it?

○ Is it personally engaging for them?

The Challenges must be based on verifiable facts. We've provided a list of resources to use in each type of agency. The Agents of Discovery team always cites the sources they use in case there are any questions. We suggest teachers and other Challenge creators do the same. Since Challenges can easily cover new subject areas, please consult with a member of the Agents of Discovery Challenge team or with a local librarian to make sure you are using authoritative sources when writing your Challenge.

4 **Make sure you are using authoritative sources** and that Agents of Discovery or your organization has the rights to share the images, videos, or audio. Please check our legal guidelines on copyright. If you have a question, contact Agents of Discovery. Here is a list of authoritative sources we have cleared for use in customized and pre-packaged Challenges.

Art and Architecture

❯ The Met http://www.metmuseum.org/%20search-results (check on whether public domain or not. Materials in the public domain will be identified with a Creative Commons Zero (CC0) icon)

Biodiversity

❯ Encyclopedia of Life http://eol.org

❯ Calscape.org http://www.calscape.org/loc-California/

❯ Biodiversity Heritage Library http://www.biodiversitylibrary.org/advsearch

❯ Inaturalist http://www.inaturalist.org

Earth Sciences

❯ Agriculture - https://www.ars.usda.gov/oc/images/image-gallery/

General (Cover multiple topics)

❯ Harvard Law School list of public domain images http://guides.library.harvard.edu/finding_images

❯ Smithsonian Encyclopedia (Science and Technology, Biodiversity, Art and Design, History and Culture) (http://www.si.edu/encyclopedia

❯ PBS Learning Media: http://www.pbslearningmedia.org

❯ Wikipedia list of public domain images https://commons.wikimedia.org/wiki/Commons:Free_media_resources/Photography

❯ Pixabay https://pixabay.com

❯ Library of Congress https://www.loc.gov

❯ The British Library http://www.bl.uk (not always free) and more from the BL https://m.flickr.com/#/photos/britishlibrary/

❯ Open Educational Resources Commons https://www.oercommons.org

❯ Free Sounds http://soundbible.com

❯ Free pictures (CC0 Public Domain) http://absfreepic.com

- Free pics –http://www.imageafter.com/index.php
- Free images - http://www.freeimages.com
- Free pics http://www.photos-public-domain.com
- Public domain pictures http://www.picdrome.com
- Pixnio http://www.pixnio.com

History
- BBC History: http://www.bbc.co.uk/history
- Smithsonian Education: http://www.smithsonianeducation.org/
- National Archives (US) https://www.archives.gov/education

Life Sciences
- U.S. Fish and Wildlife Services https://digitalmedia.fws.gov/
- U.S. Fish and Wildlife Services (Audio/Video) https://www.fws.gov/video/sound.htm

Parks
- National Parks Services https://www.nps.gov/index.htm

Space
- NASA Galleries https://www.nasa.gov/centers/hq/home/index.html
- More from NASA https://www.nasa.gov/multimedia/imagegallery/index.html
- And more from NASA - https://soundcloud.com/nasa

Water
- U.S. Geological Survey Education Site:
  https://water.usgs.gov/education.html
- NOAA: http://www.noaa.gov/
- FAO http://www.fao.org/about/en/
- The University of Arizona - Open Water Repository
  http://arizona.openrepository.com/arizona/handle/10150/135401

5 Words that describe images or video that appearing in the Challenge choices must match the images or video.

6 This is an educational game played on a mobile device, so the Challenges have to **be short (max 30 words) and to the point.** The idea is for the participants to quickly capture the key points and be able to participate in selecting a choice, identifying the Challenge in the context of the Mission they are undertaking, and to retain that knowledge. Less is more. Always keep in mind your text will show up in a dialog screen on a smartphone or tablet. Too much text can distract students - or worse have them lose interest.

7 **Use language that the target group will understand.** Write according to reading comprehension ability. If you are not an educator, nor have educational experience, consult with an Agents of Discovery team member. For an initial check on readability, look at the online utility linked https://www.online-utility.org/english/readability_test_and_improve.jsp. It is based on the Coleman Liau Index, Flesch Kincaid Grade Level, ARI (Automated Readability Index), and SMOG.

8 Agents of Discovery is an online game, so images, photography, video and audio are important. We highly recommend adding pre and post Challenge images or related images. **Images need to be 512x512 in size.** You must have the rights to any photos you utilize. If you do not have the rights, you can use public domain images.

9 You should tag Challenges so they are easily found in the Library. Be sure to tag content with all appropriate meta tags. It makes it much easier to find them.

10 You can assign USBees to Challenges. The Mission is designed to enable players to acquire enough USBees to redeem them for a game reward. Unless specifically asked to do so, the Challenges should be left at the default USBee assignments.