



## Top 9 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 the Mission location will help to ensure the theme plays out as intended in the physical setting. Playing it in advance always helps, too.

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 information may be optional for informal markets.

- 1
  - ▶ The Pre-Challenge Text needs to provide the context for the Challenge and help the participant solve it.
  - ▶ The Pre-Challenge image should support the Pre-Challenge Text.
  - ▶ 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 Text 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-ChallengeText [this may be optional for informal markets].



2

There are different Challenge types (profiled at the end of this document).

- ▶ AR Catch
- ▶ AR Scavenger Hunt
- ▶ Color Picker
- ▶ Detective
- ▶ Image 50/50
- ▶ AR Picker
- ▶ Player Response
- ▶ Sound Matcher
- ▶ Text 50/50
- ▶ Text Checklist
- ▶ Image Checklist

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.

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 Text help them answer the Challenge question?
- Does the Challenge provide new information they didn't know before?
- Does the Post-Challenge Text 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 incorrect?
- Do the words and the images/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's Customer Success team or with a local librarian to make sure you are using authoritative sources when writing your Challenge.



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

### **Art and Architecture**

- The Met (check on whether public domain or not):  
<http://www.metmuseum.org/search-results#!/search?q=public%20domain%20images>

### **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/>  
(Covers multiple topics)
- 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](https://commons.wikimedia.org/wiki/Commons:Free_media_resources/Photography)
- Pixabay: <https://pixabay.com>
- Creative Commons: <https://creativecommons.org> (all public domain media)
- Library of Congress: <https://www.loc.gov>
- The British Library: <http://www.bl.uk>
- Open Educational Resources Commons: <https://www.oercommons.org>
- Free Sounds: <http://soundbible.com>
- Free pictures (CCO Public Domain): <http://absfreepic.com>



- Free images: <http://www.freeimages.com>
- Public domain pictures: <http://www.picdrome.com>
- Pixnio: <http://www.pixnio.com>
- Internet Archive: <https://archive.org>
- Wikipedia Commons: [https://commons.wikimedia.org/wiki/Main\\_Page](https://commons.wikimedia.org/wiki/Main_Page)
- The Public Health Image Library <https://phil.cdc.gov/phil/home.asp>
- The NREL image library <https://images.nrel.gov/bp/#/>

### **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:  
<http://digitalmedia.fws.gov/cdm/landingpage/collection/natdiglib>

### **Parks**

- National Parks Services: <https://www.nps.gov/media/multimedia-search.htm>

### **Space**

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

### **Water**

- U.S. Geological Survey Education Site: <https://water.usgs.gov/education.html>
- National Oceanic and Atmospheric Administration : <http://www.noaa.gov/>
- Food and Agriculture Organization: <http://www.fao.org/about/en/>
- The University of Arizona - Open Water Repository: <http://arizona.openrepository.com/arizona/handle/10150/135401>

We're always open to learning about other potential sources that other teachers might find useful. Please let us know if you come across a great resource.



- 5** Words that describe images or audio appearing in the Challenge choices must match the images or audio.
- 6** This is an educational game played on a mobile device, so the Challenges have to **be short (maximum 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 in some cases, even 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, or do not have educational experience, consult with an Agents of Discovery team member.
- 8** Agents of Discovery is an interactive game, so images and audio are important. We highly recommend adding Pre- and Post-Challenge images. **Images should be at least 512 x 512 pixels in size.** You must have the rights to any media you utilize. If you do not have the rights, you can use public domain images.
- 9** If planning to share to the Library, you should use keywords in your Challenges. This allows them to be easily found by others in the Library.