YACかわら版 第11回

3月26日配信号

「宇宙」で英語に親しもう

YAC団員の皆様は元気にすごしていますか。家の方と相談しながら春の生活を重ねていることと思います。

本号では「英語」についての話題です。

YACのリーダーの方向けに、JAXA/YAC宇宙教育指導者セミナーが各地で開催されています。プログラムには各YAC分団が充実した分団活動ができるように、分団の指導者の方が研修されています。水ロケットやモデルロケットグライダー、GPS,衛星データ等を取り上げています。福岡分団の山下副分団長が講師になって「宇宙教育における英語」がプログラムに入れられていたことがあります。皆様がすぐにも活用できそうなことを紹介しましょう。

ただし、インターネットを使用する場合は次のことを守ってください。

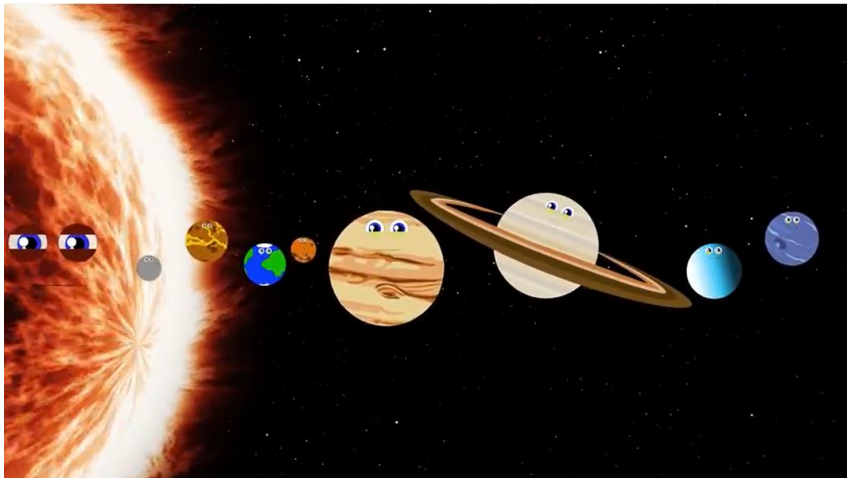
・インターネットのウエブサイトを使用する場合はお家の方との約束を守ってください。
　サイトによってはCMが入ることがあります。
　CMは子ども用ではないものがほとんどです。
　外国のユーチューブ等は、お家の方と一緒に見ることを強くすすめます。
・インターネットで「宇宙」を学ぶとき、他のサイト等への「道草」はしないでください。
　お家の方との約束を守ってください。

＊4ページ以降は英語版の水ロケット組立説明です。
福岡分団山下副分団長協力

Planet Song for Song/Solar System Song

①　太陽系の歌　惑星の歌

https://www.youtube.com/watch?v=mQrlgH97v94



単語がよめなくても、辞書がなくても流れてくる歌声に引き込まれます。
英語が身近になります。

planets for kids
②　子どもための惑星

http://www.bing.com/videos/search?q=planets+for+kids&FORM=VDVVXX

①　太陽系の歌　惑星の歌を含め多くの動画があります。

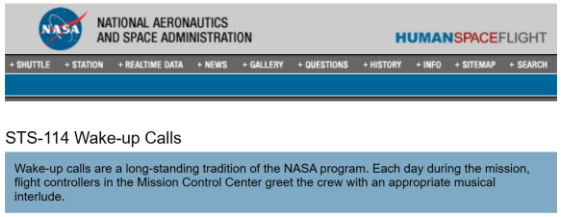

すごい数の動画があります。
画面をクリックすると始まります。
サイトにはもっとあります

Wake-up Calls（ウェイクアップコール）

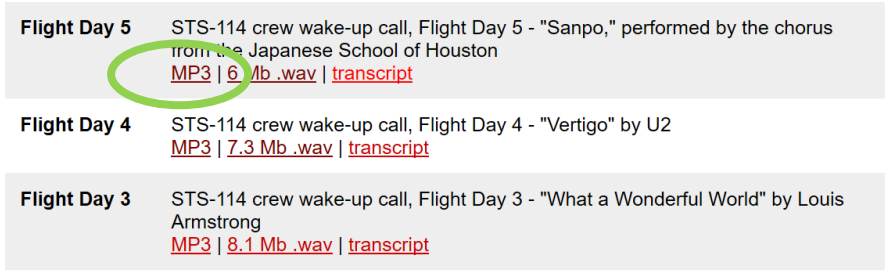
野口宇宙飛行士のお目覚めコール

国際宇宙ステーションで活動した野口宇宙飛行士（ミッションスペシャリスト）さんは、船外活動を行う日の朝、日本の子どもの誰もが知っている曲がウェイクアップコールを選曲した。

http://spaceflight.nasa.gov/gallery/audio/shuttle/sts-114/html/ndxpage1.html

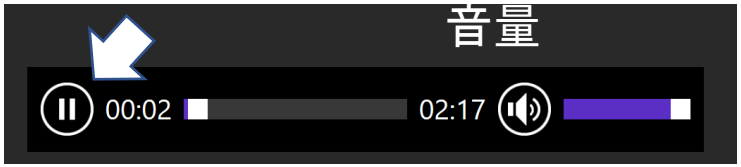


①下にスクロール



② 5日目の「MP3」をクリック

③ 停止などの操作と音量

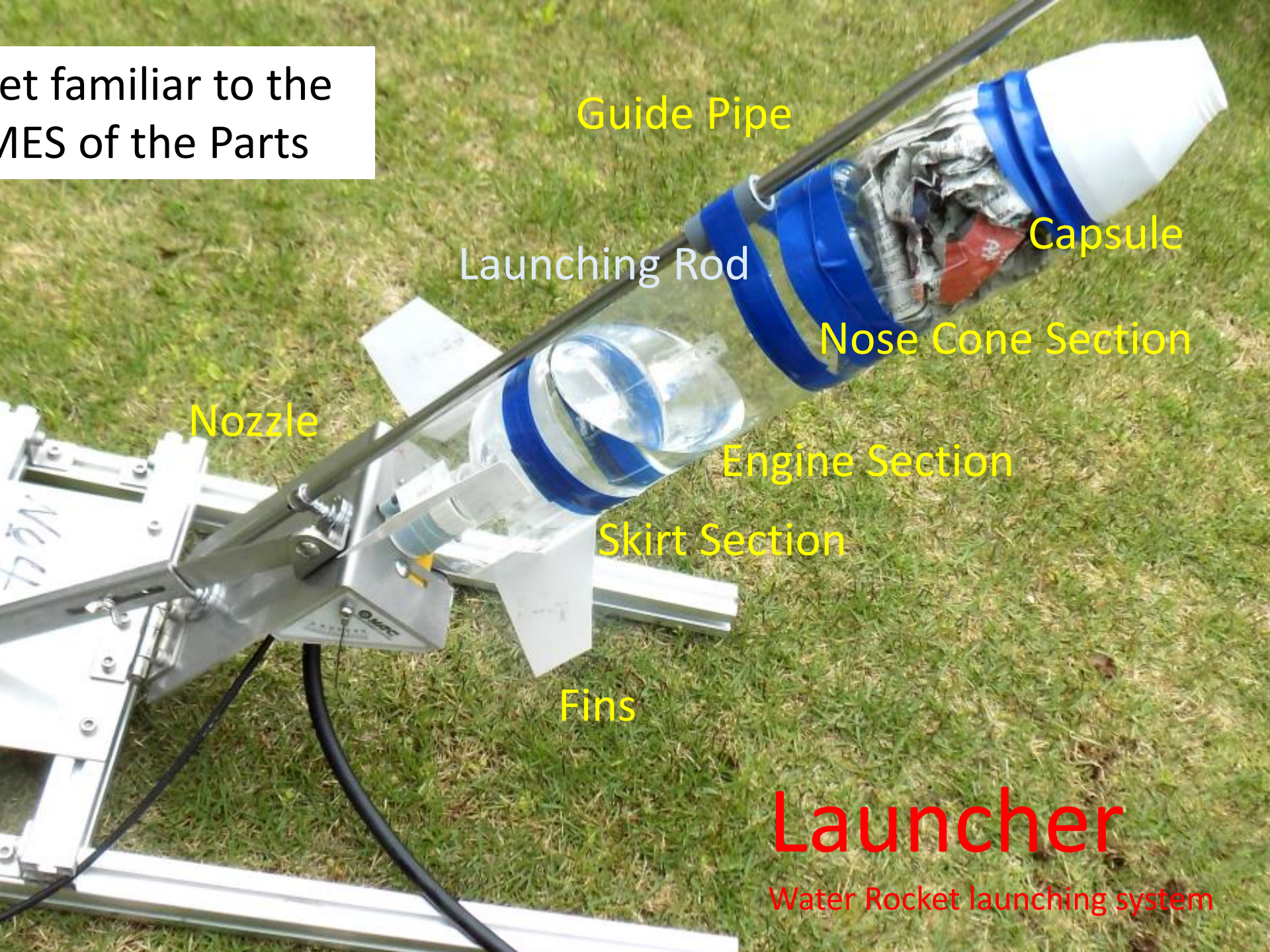


④「transcript」をクリックするとヒューストンとの会話内容が表示される（中学生以上向き）

STS-114 Wake-up Calls
Flight Day 5 Transcript
CAPCOM Shannon Lucid: Good morning, Discovery! And a special morning to you, Soichi If you'd been listening really close to the wakeup music, you might have been able to hear your own childrens' voices in the choir that was singing.
Mission Specialist Soichi Noguchi: Good morning, Shannon, and thanks for the great chorus by the Japanese School of Houston and also my wonderful family, Miki, Yuka, Am and Miwa. Thanks for the great support over the many years. It's been a long wait, but it's certainly worth it. And today, let's go spacewalk.
Lucid: And we're all watching, Soichi. It's going to be a great day. This is going to be an absolutely fantastic day for you, and your kids are really going to enjoy watching you. Ar by the way, it's a special day, not only because you're making a spacewalk -- you and Steve -- for the first time, but if you happen to run into the ISS CDR sometime today, you might want to congratulate him, because this is the start of his third year in space. He ha now had two years in space, and this is the start of his third year, so you might want to congratulate him about that sometime today.
Noguchi: We sure will. Thanks!

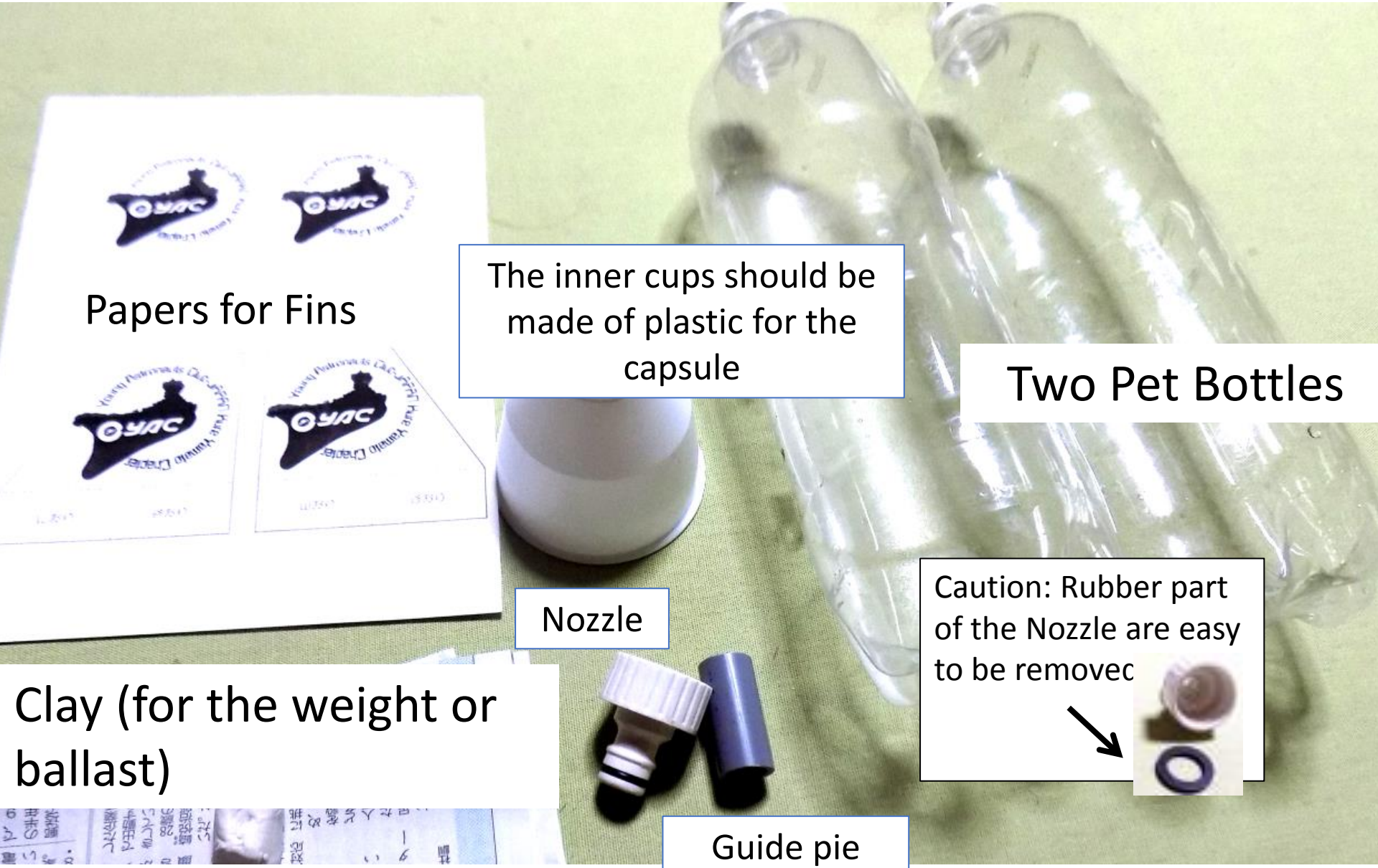

The First Experience
"Water Rocket"
Young Astronaut Club

et familiar to the
MES of the Parts

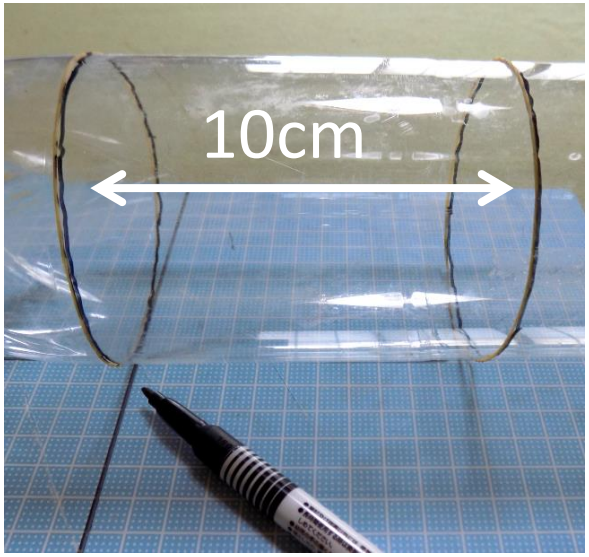


② Confirm the materials

1.5L Pet Bottles for the carbonated drink(soda) free of scratch an damage



③ Cut the Pet Bottle into three



Use of the Pet Bottles

Use rubber band to decide the position of cutting line

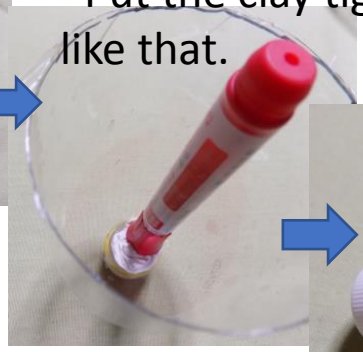
Use these two

Cut the pet bottle with a cutter knife and cut out of the parts with scissors

Caution: The cutting portion is ridged.
Recommendation: cover the edge (ridged part) with cellophane tape

④ Connect the nose corn section, the engine section and the skirt section

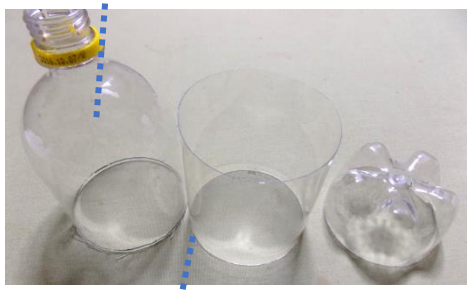
・Cap the Pet Bottle and put the clay (ballast weight) into the inside of the nose cone part.



・Put the clay tightly with the end of a pen or something like that.

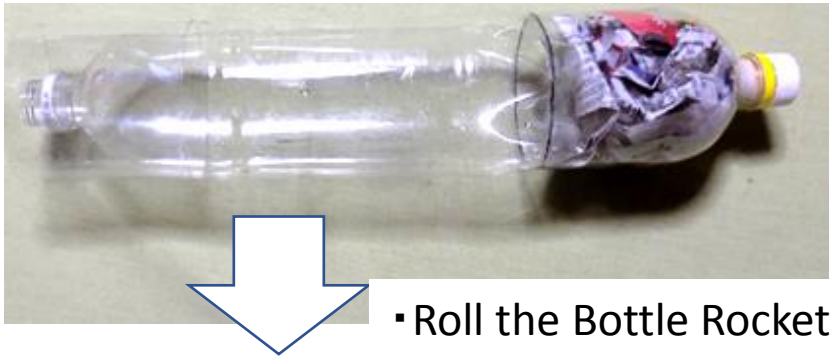
・Fill out the gaps inside the nose cone with small-cut newspaper.

・Connect the engine part and Nose corn part together



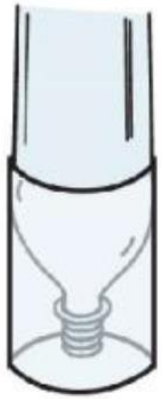
・Connect the nose cone part to the skirt part.

・Align the low line of the skirt and edge of the bottle mouth (engine mouth).



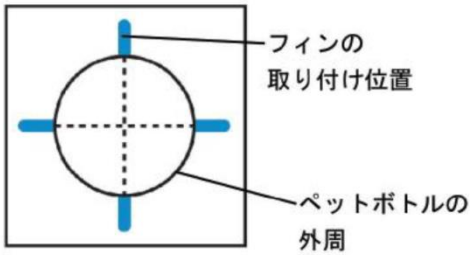
・Roll the Bottle Rocket on the top of the desk to confirm it rolls straight and tape the parts.

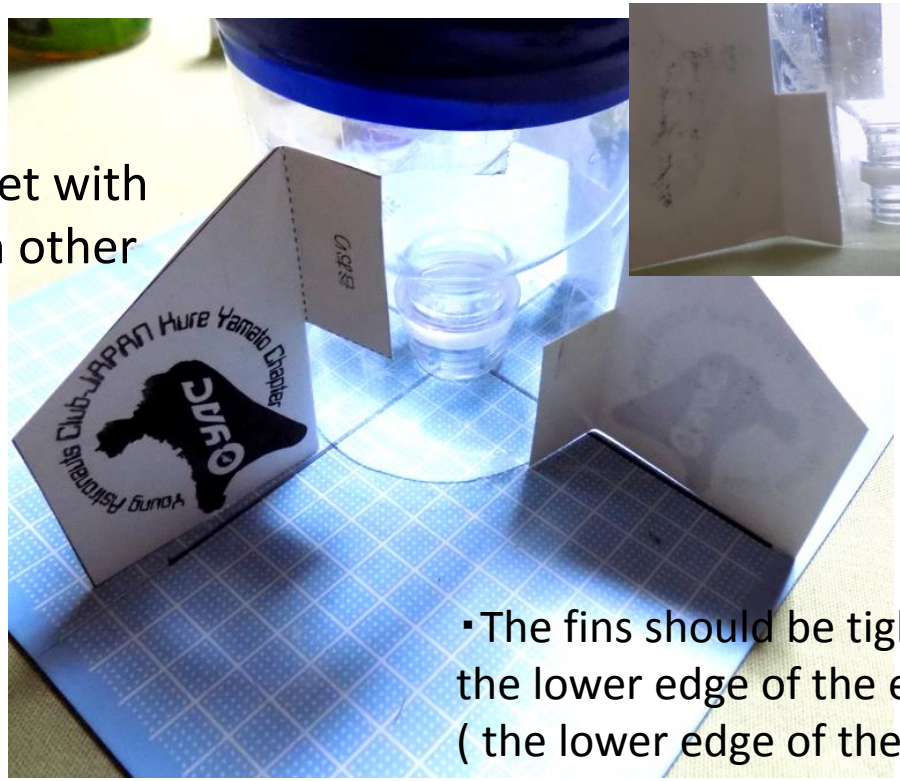
⑤ Put the fins to the skirt part.



・Make sure the fins set with 90 degrees from each other

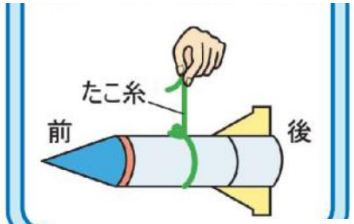
フィン取り付け位置図

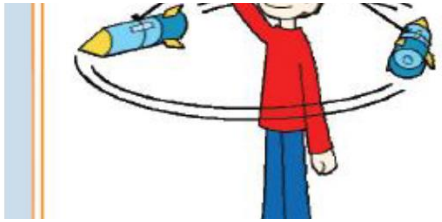




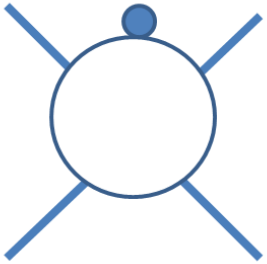
・The fins should be tightly put to the lower edge of the engine pats (the lower edge of the skirt part).

⑥ Set the Guide Pipe to the centroid (center of the gravity) position of the Rocket





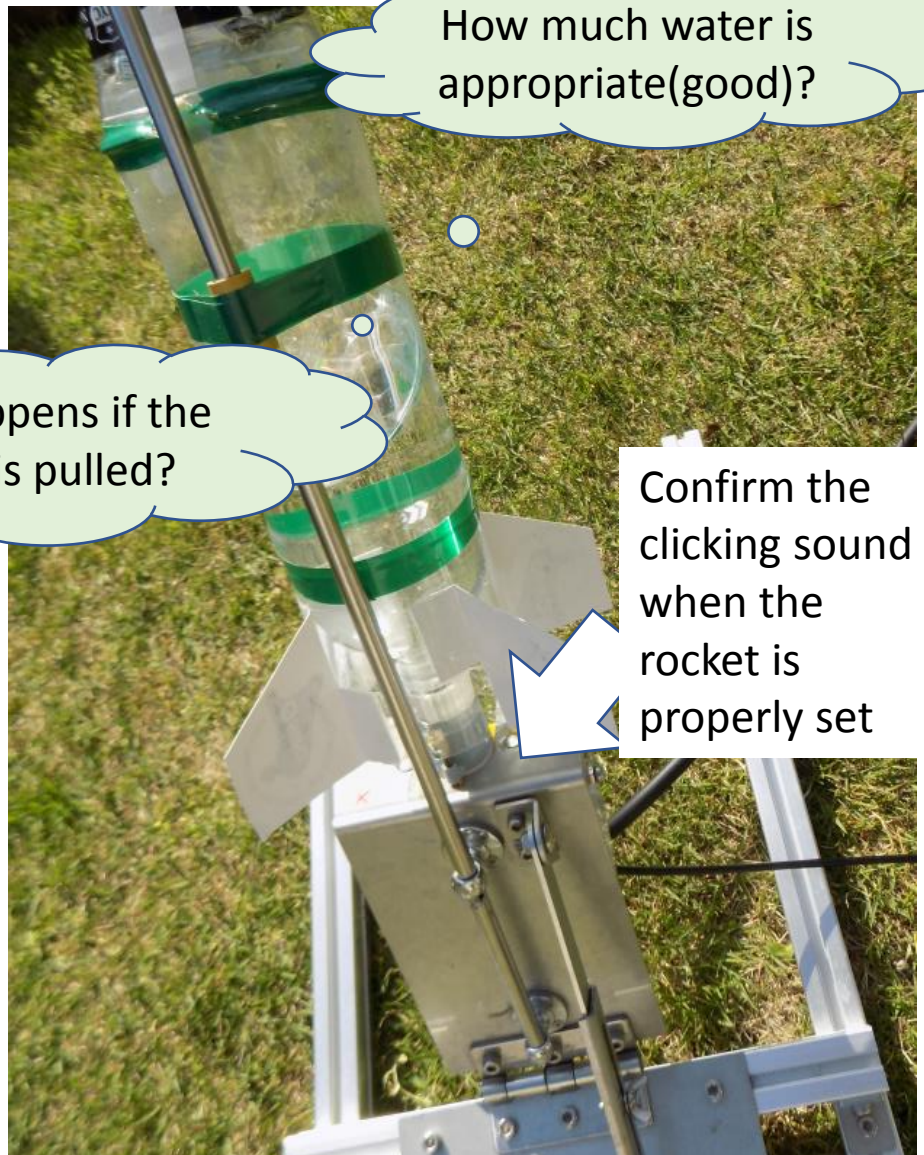
To confirm whether the rocket flies stably.



・Tape the Guide Pipe provisionally with cellophan tape and then fix it tightly with

⑦ Put the Nozzle to the Water Rocket and set it into the Water Rocket Launcher after pouring certain amount of water in it.

What happens if the trigger is pulled?

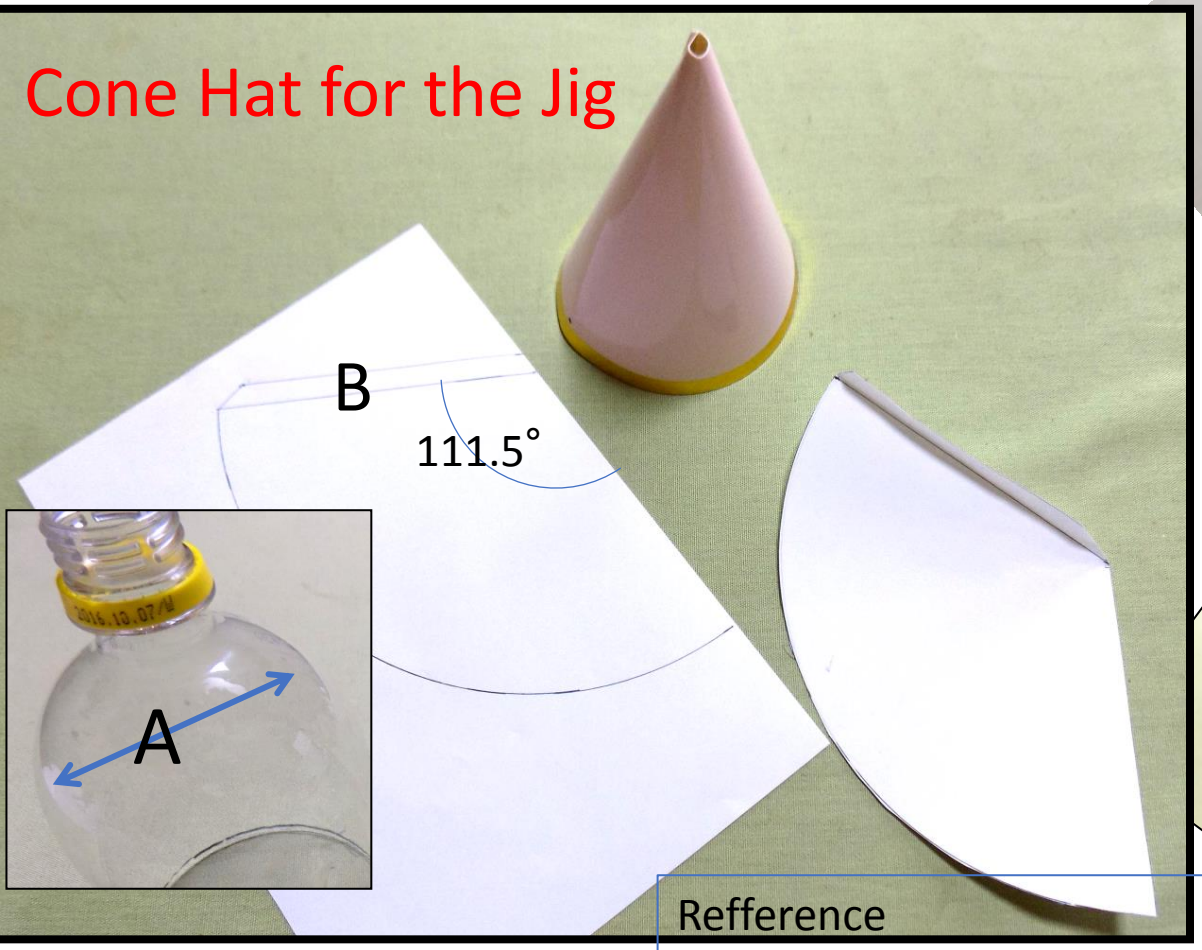


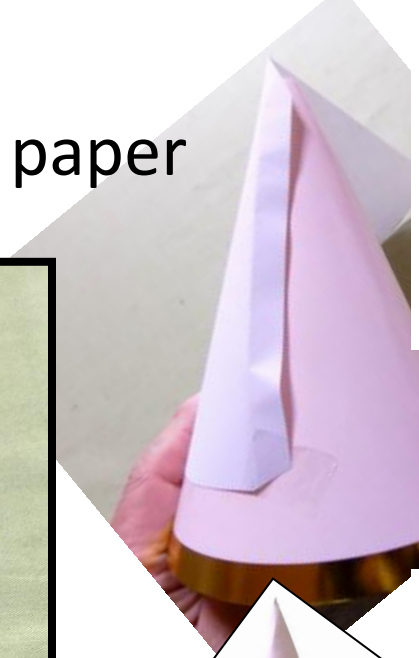
How much water is appropriate(good)?

Confirm the clicking sound when the rocket is properly set

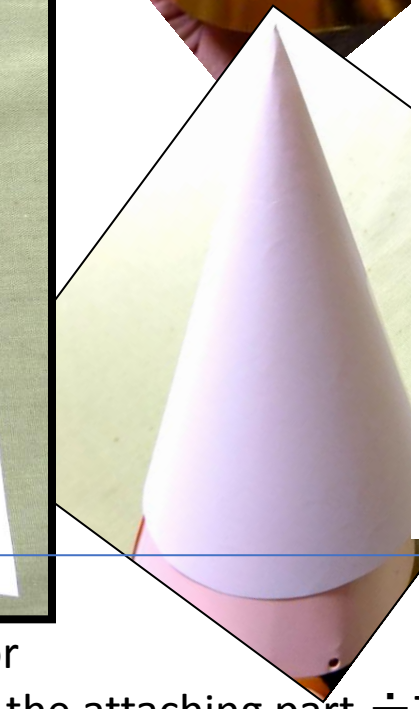
Appendix

How to make Nose Cone with thick paper





Tape tentatively so that the material paper could be easily shapend.



Suggestion:
Cone shaped jig is helpful to make up the nose cone.

Ex: The hat made out of paper, miniature safety cone etc….

The Mouth part of the Pet Bottle
A＝8.8cm(diameter)
The length of the Nose Cone
B＝14.2 cm ⇒ Angle = About 111.5 degrees.

Refference
The angle of the sector
⇒ The diameter of the attaching part ÷The length of the Nose cone × 360°