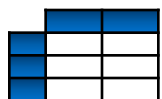


# Examples

## Think-Do-Feel Table

Note: Some of these are actual examples, others are artificial



Generic



Cloud identification

$$\frac{\partial(\zeta + f)}{\partial t} = \dots$$

Vorticity equation



RGB satellite imagery



Presentation preparation



Review of training funding



Thunderstorm forecast  
- novice



Conduct a webinar



Thunderstorm forecast  
- experienced



WMO: Your friend



Culture and learning



Pilot briefing

# Some (of many) possible examples

	Now*	After
Think	<ul style="list-style-type: none"> <li>• I don't know how to do this</li> <li>• I think I can do this (but I can't)</li> <li>• It's difficult, an art</li> <li>• I've always done it this way</li> <li>• This isn't relevant for me</li> <li>• I need help here</li> </ul>	<ul style="list-style-type: none"> <li>• These ideas will help me in my work</li> <li>• There is a systematic approach</li> <li>• I can master this</li> </ul>
Do	<ul style="list-style-type: none"> <li>• Nothing</li> <li>• Do the wrong thing</li> <li>• Do it the wrong way</li> <li>• Do it but could improve</li> </ul>	<ul style="list-style-type: none"> <li>• Apply the ideas – knowledge, procedures, decision making</li> </ul>
Feel	<ul style="list-style-type: none"> <li>• No strong feelings</li> <li>• Disengaged</li> <li>• Apprehensive</li> <li>• Resistant to change</li> <li>• Strongly opposed</li> <li>• Enthusiastic</li> <li>• Overwhelmed</li> </ul>	<ul style="list-style-type: none"> <li>• Motivated, keen to become proficient</li> <li>• Confident</li> <li>• Excited/enthusiastic</li> <li>• Supported</li> </ul>

\* Different learners may have different starting points



# Use RGB satellite channel combinations to identify features and phenomena

	Now*	After
Think	<ul style="list-style-type: none"><li>• There are so many options I am confused</li><li>• I'm managing fine with Vis/IR/WV</li><li>• This is a valuable tool but I don't know how to use it fully</li></ul>	<ul style="list-style-type: none"><li>• RGB images add value in combination with Vis/IR/WV</li><li>• I'm clear about which RGBs to use in different situations</li></ul>
Do	<ul style="list-style-type: none"><li>• Don't use them or use limited combinations</li><li>• Use them but don't obtain full value</li></ul>	<ul style="list-style-type: none"><li>• Use the best RGB for the problem/situation at hand</li><li>• Extract optimal information</li></ul>
Feel	<ul style="list-style-type: none"><li>• Overwhelmed</li><li>• Resistant as too busy already</li><li>• Excited by the possibilities</li></ul>	<ul style="list-style-type: none"><li>• Keen to use RGB for maximum benefit</li><li>• I am confident applying this technique</li></ul>

# Forecast thunderstorm initiation - **Novice**

	<b>Now*</b>	<b>After</b>
<b>Think</b>	<ul style="list-style-type: none"><li>• I don't know how to do this</li><li>• It's difficult, an art</li></ul>	<ul style="list-style-type: none"><li>• There is a systematic approach</li><li>• I can master this</li></ul>
<b>Do</b>	<ul style="list-style-type: none"><li>• Nothing yet</li></ul>	<ul style="list-style-type: none"><li>• Forecast thunderstorms based on systematic application of the ingredients method</li></ul>
<b>Feel</b>	<ul style="list-style-type: none"><li>• No strong feelings</li><li>• Apprehensive ("it's hard")</li><li>• Excited ("this is why I became a meteorologist")</li></ul>	<ul style="list-style-type: none"><li>• Keen to become proficient</li></ul>

# Forecast thunderstorm initiation – Proficient forecaster

	Now*	After
Think	<ul style="list-style-type: none"><li>• I already know what to do</li><li>• I'm not sure if there are new techniques</li><li>• I know some people forecast storms better than I do but I don't know how they do it</li></ul>	<ul style="list-style-type: none"><li>• My forecasting will improve if I apply these ideas</li><li>• I know the latest techniques</li><li>• I am confident that my forecasting approach is state of the art</li></ul>
Do	<ul style="list-style-type: none"><li>• Standard approach to forecasts</li></ul>	<ul style="list-style-type: none"><li>• Incorporate the latest techniques into their forecast process</li></ul>
Feel	<ul style="list-style-type: none"><li>• Forecasting storms is stressful</li><li>• This training will be a waste of time</li><li>• This training is what I need to improve my forecasting</li></ul>	<ul style="list-style-type: none"><li>• Keen to apply these new techniques</li><li>• I am confident with my forecasting</li></ul>



Pat Parrish

# Teacher responsiveness to culture and learning

Session with WMO Regional Train the Trainer course

	Before	After
Think	Teachers may think ... <ul style="list-style-type: none"><li>• Culture is not important enough to consider</li><li>• Students must adapt to their style</li><li>• Culture is too complicated, there is nothing to be done</li></ul>	I want teachers to think that culture ... <ul style="list-style-type: none"><li>• Is central to learning</li><li>• Affects how and what we learn</li><li>• Affects how we think</li><li>• Must be considered when teaching</li></ul>
Do	Teachers may ... <ul style="list-style-type: none"><li>• Ignore cultural differences</li><li>• May simply avoid dealing with differences</li></ul>	I want teachers to ... <ul style="list-style-type: none"><li>• Consider the cultural differences existing among students</li><li>• Use flexible and adaptive activities</li><li>• Openly discuss cultural preferences</li><li>• Use differences to enrich the learning experience</li></ul>
Feel	Teachers may feel ... <ul style="list-style-type: none"><li>• Intimidated or fearful of cultural differences</li><li>• Lack of empathy for differences</li><li>• The challenge is too hard</li></ul>	I want teachers to feel ... <ul style="list-style-type: none"><li>• Interested to address cultural differences</li><li>• Excited about the existence of cultural differences</li></ul>

# Cloud Identification

	Now	After
Think	<ul style="list-style-type: none"><li>• Already know some basic types</li><li>• Some misconceptions and confusions</li></ul>	<ul style="list-style-type: none"><li>• Know all the types and how to discriminate between them</li></ul>
Do	<ul style="list-style-type: none"><li>• Nothing yet</li><li>• Keen observer of clouds</li><li>• Have problems at night</li></ul>	<ul style="list-style-type: none"><li>• Situational awareness – “Watch the sky”</li><li>• Carefully discriminate similar types - committed to accurate observations</li></ul>
Feel	<ul style="list-style-type: none"><li>• No strong feelings</li><li>• Passionate cloud observers or excited to learn</li><li>• Worried by Latin names</li></ul>	<ul style="list-style-type: none"><li>• This is important and I can do it well</li></ul>

# Presentation Skills



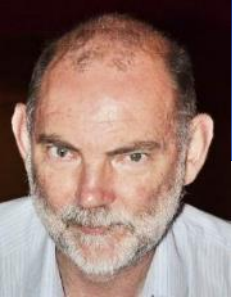
	Now	After
Think	<ul style="list-style-type: none"><li>• How most people present is the best way</li><li>• I could improve but don't have the skills or knowledge</li></ul>	<ul style="list-style-type: none"><li>• There are better approaches that I can readily apply, I know what they are and how to do it</li></ul>
Do	<ul style="list-style-type: none"><li>• Standard presentation with too little interaction, too much content, too many text and bullets, weak or missing conclusions</li></ul>	<ul style="list-style-type: none"><li>• Apply evidence-based design principles</li></ul>
Feel	<ul style="list-style-type: none"><li>• Unaware</li><li>• Uncertain</li><li>• Anxious</li><li>• Frustrated</li></ul>	<ul style="list-style-type: none"><li>• Confident</li></ul>





# Conduct a Webinar

	Now	After
Think	<ul style="list-style-type: none"><li>• I don't know where to start</li><li>• Most webinars are boring</li><li>• I need/want to do this</li></ul>	<ul style="list-style-type: none"><li>• It's only an incremental change from what I do now</li><li>• I have ideas on how to make it engaging</li><li>• I will start simply and add more techniques with experience</li></ul>
Do	<ul style="list-style-type: none"><li>• Haven't done a webinar but am experienced with face to face training</li><li>• Tried it and it was poor/OK/good</li></ul>	<ul style="list-style-type: none"><li>• Conduct a webinar</li><li>• Engage the audience</li></ul>
Feel	<ul style="list-style-type: none"><li>• Daunted or overwhelmed</li><li>• Resistant</li><li>• Keen</li></ul>	<ul style="list-style-type: none"><li>• Keen to try</li><li>• Confident</li></ul>



Jeff Wilson

# WMO: Your Best Friend

Session with WMO Regional Train the Trainer course

	Now	After
Think	<p>WMO has lots of funds</p> <p>Don't know the real problems</p> <p>May not care</p>	<p>We do care and are here to help</p> <p>They are part of the ETRP</p> <p>Limited funds</p>
Do	<p>Request fellowships and support</p>	<p><b>Seek</b> information</p> <p><b>Share</b> information</p> <p><b>Take action</b></p>
Feel	<p>Frustrated that can't receive funding or assistance and don't know how to make a request</p>	<p>Confident that they can receive assistance from WMO ETRP if they have a problem or a need</p>



# Conduct a Pilot briefing

Analyse how the pilots think and feel and what they do when they come to be briefed

	Now	After
Think	<ul style="list-style-type: none"><li>• Wonder what weather will affect the flight</li></ul>	<p>Be aware of:</p> <ul style="list-style-type: none"><li>• hazardous weather</li><li>• when and where</li><li>• developments to watch for</li><li>• other features that may affect the flight</li></ul>
Do	<ul style="list-style-type: none"><li>• Come for briefing</li></ul>	<ul style="list-style-type: none"><li>• Use meteorological guidance to avoid hazards and create flight plans</li></ul>
Feel	<ul style="list-style-type: none"><li>• Different pilots may be +ve, -ve or neutral about forecasts</li></ul>	<ul style="list-style-type: none"><li>• Confidence in the forecasts</li><li>• Happy with the service</li></ul>

$$\frac{\partial(\zeta + f)}{\partial t} = \dots$$

# Learn the vorticity equation

	Now	After
Think	<ul style="list-style-type: none"><li>• It looks too complicated and difficult (too much maths)</li><li>• I can't see the relevance as it's too theoretical</li></ul>	<ul style="list-style-type: none"><li>• Understand the physical meaning of all terms</li><li>• The approximations help to understand atmospheric systems and flow</li></ul>
Do	<ul style="list-style-type: none"><li>• Nothing yet</li><li>• Learn the equations to pass an exam but not how to use it</li></ul>	<ul style="list-style-type: none"><li>• Apply vorticity thinking to explain atmospheric systems and flows</li></ul>
Feel	<ul style="list-style-type: none"><li>• Daunted or overwhelmed</li><li>• Resistant</li><li>• Reluctant (it's not relevant)</li><li>• Keen to learn</li></ul>	<ul style="list-style-type: none"><li>• Motivated and keen to try</li><li>• Confident</li></ul>

	Now	After
Think	<ul style="list-style-type: none"> <li>• Can't see much value for the money spent</li> <li>• Training is costly so want to reduce costs</li> </ul>	<ul style="list-style-type: none"> <li>• Money spent on training is well spent</li> <li>• We should invest more in training</li> </ul>
Do	<ul style="list-style-type: none"> <li>• Propose to cut training to reduce costs</li> <li>• Maintain training funding at a low level</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain or increase funding</li> </ul>
Feel	<ul style="list-style-type: none"> <li>• Training is too expensive / not a priority / a waste of time</li> </ul>	<ul style="list-style-type: none"> <li>• Training is the backbone of our organisation</li> <li>• I'm committed to training</li> </ul>