Understanding Take-Off and Climbing Checks

These checks are not a poem, demonstrate that you have checked each item with either touching the control or pointing at the relevant gauge. Emphasise that you have completed the check on the particular item, by accentuating the statement verbs "*is/are*" etc, as in "*brakes **ARE** off*"

FELT Check			
	Code	**Check Statement**	**Explanation**
F	Flaps	Airspeed **is** safe	After rotating and climbing for at least 300', check that the airspeed is above Vx (eg *55Kts on a C-152, 60Kts for a Warrior*). Do not attempt to lower the flaps until this safe speed has been exceeded and the aircraft is maintaining this speed.
		Positive rate of climb achieved	Check that a positive rate of climb is being sustained
		Flaps **up**	Raise the flaps by one stage at a time. If more than one stage is lowered, check that a positive RoC is being maintained **between** each raising of a stage. eg "*Positive rate of climb achieved, raising one stage of flap {pause}, positive rate still seen, raising final stage of flap*"
E	Engine	Engine T's and P's **are** in the green	Check the engine(s) oil temperature and pressure are within limits
L	Landing Light	Landing light **is** off	Turn off the landing light to reduce unnecessary load on the alternator
T	Trim	Trim **is** set	After giving the flaps time to retract, and the aircraft time to settle at it's new attitude and airspeed, re-trim
S	Speed	Climbing **at** (*Vy/Climb*)	Accelerate to either Vy or whatever chosen climb speed you have selected and self-brief. eg "*Flaps retracted, climbing away at 65knots*"

PAT / PAST Climbing Check			
	Code	**Check Statement**	**Explanation**
P	Power	T's & P's **are** in the green	Every manoeuvre starts with a lookout scan. Then check the engine(s) oil temperature and pressure are within limits. Check your heading.
		Power **and** Pitch	Smoothly apply full power whilst simultaneously pitching to the correct attitude for your chosen climb speed.
A	Attitude	Attitude **is** set	Be careful to pitch the aircraft to the correct attitude and then leave it there and wait. the aircraft has inertia and will take some time for it's speed settle at the new chosen attitude Be careful not to chase speed by increasing the pitch beyond the correct attitude in an attempt to slow the aircraft down as you will end up over-pitching and slowing down below your selected speed.
S	Settle	Speed **has** settled	Having selected and held the correct pitch attitude be patient and allow the aircraft to settle
T	Trim	Trim **is** set	After about 2 minutes the aircraft will have settled into the new attitude and airspeed. Trim where necessary to relieve control column forces. When a climb of less than 400' is required there is little point in re-trimming as the aircraft will not have time to settle before reaching the destination altitude.

DAABLE Climbing Check			
	Code	**Check Statement**	**Explanation**
D	Direction	Direction is steady at xxx	Check that you are maintaining the correct heading on the DI. Eg "*heading is steady at zero-four-five degrees*"
A	Attitude	Attitude **is** set, speed **is** steady at zzz	Check that the attitude is steady and that the horizon is cutting across the windscreen/window at the correct position, cross-check with the Attiude Indicator. Cross-check the airspeed is steady for the chosen climb. eg "*Speed is steady at Vy, 65knots*"
A	Altitude	Altitude **is** xxx, yyy **to** go	Check your altitude and check how many more feet you need to climb before you need to level off. Anticipate your level off height at about 50' to go for a Cessna-152
B	Ball	Ball **is** in the middle	The aircraft is remaining in balance. Extra right rudder will be required during the climb due to high prop-wash from full power and low airspeed
L	Lookout	Looking…..	After every 500' of climb, lower the nose and carry out a lookout scan. Do not re-trim or adjust the power setting as you will not be holding this new attitude long enough to justify it. Return to your original attitude. This will be easy to select as you should be trimmed for it.
E	Engine	Engine T's and P's **are** in the green	The engine is working very hard and is under high stress as it is at full power and at a slow speed so cooling is less effective. Check the engine(s) oil temperature and pressure are within limits
Thereafter perform a simplified DAAB check until the next 500' is reached then a full DAABLE			
D	Direction	Direction is steady at xxx	
A	Attitude	Attitude **is** set, speed **is** steady at zzz	
A	Altitude	Altitude **is** xxx, yyy **to** go	
B	Ball	Ball **is** in the middle	

APT / ASPT Levelling-Out Check			
	Code	**Check Statement**	**Explanation**
A	Attitude	Attitude **is** set for cruise	Lower the nose and pitch the aircraft to the correct attitude for straight and level cruise then leave it there and wait whilst maintaining full-power. This is 90 Knots for a C-152 The aircraft has inertia and will take some time to accelerate and for it's speed to settle at the new chosen attitude Do not throttle back.
S	Settle	Speed **has** settled	Having selected and held the correct pitch attitude be patient and allow the aircraft to accelerate and settle at the cruise speed
P	Power	Cruise power **is** selected	Then check the engine(s) oil temperature and pressure are within limits. Check your heading.
T	Trim	Trim **is** set	After about 2 minutes the aircraft will have settled into the new attitude and airspeed. Trim where necessary to relieve control column forces. Move the trim wheel in small and incremental stages whilst looking ahead to maintain the pitch and airspeed. After taking some trim, allow the aircraft to settle before taking some more, relax your grip on the control column to accurately gauge how much trim is left needing to be taken.