thinking tools for an era of change

This calendar aims to bring to life the 12 design principles developed by permaculture co-originator *David Holmgren*. Highlighting each principle over a month gives time to learn them and absorb how they can be applied using examples sourced from practitioners around the world.

In all good permaculture examples you will find they demonstrate several, sometime all, of the design principles. Each principle is part of the whole, and cannot be applied without the consideration of others.

Underpinning this are the ethics of permaculture, *earth care, people care* and *fair share*, which informs all practice.

You'll find more examples at *permacultureprinciples.com* along with a song by *Charlie Mgee* for each. Delve in deep with *Permaculture: Principles and Pathways Beyond Sustainability*, or check out some of the other titles on offer.

You can use the page below as a year planner or as a rain / temperature chart.

The calendar includes a basic guide to gardening by moon phases to help improve plant vigour and yield.

The waxing moon increases in light as it changes from new moon, through the first quarter, towards a full moon, and sap flow is drawn up. The waning moon reduces light from the full moon, through the last quarter, back to a new moon, and sap flow is drawn down.

waxing moon ○ waning moon

Each of the four phases lasts seven to eight days. At transition from one phase to the next, sowing, planting and pruning are *best avoided for 12 hours before and after the change*. Instead, use this time to *improve your soil*. The exact time is indicated in UTC* and can be adjusted to your local time using the guide at the base of this page.

If you miss the planting windows suggested, you can either wait a few weeks or plant it anyway and see how it grows.

New Moon phase

Sow or transplant **leafy annuals**; where we value or eat the leaves or stem. Eg: lettuce, spinach, celery.

First Quarter phase

Sow or transplant **fruiting annuals**; where we value or eat the fruit or seed bearing part of the plant. Eg: tomato, broccoli, beans.

Full Moon phase

Sow or plant out **root crops**; decorative and **fruiting perennials**, take cuttings and divide plants. Eg: apple, potatoes, asparagus.

Last Quarter phase

Time to **improve your soil**; weeding, mulching, making compost and manure teas, digging or ploughing.

Quarter moon icons above are for the northern hemisphere (N) and below for the southern hemisphere (S)

**Times given for moon phases are in Coordinated Universal Time (UTC) using 24-hour format, not adjusted for daylight savings: eg, if full moon was on January 5th 04:54 UTC = Melbourne +10 = 14:54 or 2:54pm.*

Auckland +12, Melbourne + 10, Adelaide +9½, Tokyo +9, Perth / Singapore +8, Moscow +4, Rome / Cape Town +2, Paris +1, London 0, São Paulo -3, Québec / New York -5, Chicago -6, Vancouver / Los Angeles -8, Hawaii -10

2016	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	2016
mon		1			30			1		31			mon
tue		2	1		31			2			1		tue
wed		3	2			1		3			2		wed
thu		4	3			2		4	1		3	1	thu
fri	1	5	4	1		3	1	5	2		4	2	fri
sat	2	6	5	2		4	2	6	3	1	5	3	sat
sun	3	7	6	3	1	5	3	7	4	2	6	4	sun
mon	4	8	7	4	2	6	4	8	5	3	7	5	mon
tue	5	9	8	5	3	7	5	9	6	4	8	6	tue
wed	6	10	9	6	4	8	6	10	7	5	9	7	wed
thu	7	11	10	7	5	9	7	11	8	6	10	8	thu
fri	8	12	11	8	6	10	8	12	9	7	11	9	fri
sat	9	13	12	9	7	11	9	13	10	8	12	10	sat
sun	10	14	13	10	8	12	10	14	11	9	13	11	sun
mon	11	15	14	11	9	13	11	15	12	10	14	12	mon
tue	12	16	15	12	10	14	12	16	13	11	15	13	tue
wed	13	17	16	13	11	15	13	17	14	12	16	14	wed
thu	14	18	17	14	12	16	14	18	15	13	17	15	thu
fri	15	19	18	15	13	17	15	19	16	14	18	16	fri
sat	16	20	19	16	14	18	16	20	17	15	19	17	sat
sun	17	21	20	17	15	19	17	21	18	16	20	18	sun
mon	18	22	21	18	16	20	18	22	19	17	21	19	mon
tue	19	23	22	19	17	21	19	23	20	18	22	20	tue
wed	20	24	23	20	18	22	20	24	21	19	23	21	wed
thu	21	25	24	21	19	23	21	25	22	20	24	22	thu
fri	22	26	25	22	20	24	22	26	23	21	25	23	fri
sat	23	27	26	23	21	25	23	27	24	22	26	24	sat
sun	24	28	27	24	22	26	24	28	25	23	27	25	sun
mon	25	29	28	25	23	27	25	29	26	24	28	26	mon
tue	26		29	26	24	28	26	30	27	25	29	27	tue
wed	27		30	27	25	29	27	31	28	26	30	28	wed
thu	28		31	28	26	30	28		29	27		29	thu
fri	29			29	27		29		30	28		30	fri
sat	30			30	28		30			29		31	sat
sun	31				29		31			30			sun